BSPR:
When the living unit has been previously equipped with the network facilities, the method includes determining whether the service request corresponding to a living unit is eligible for provisioning using the network facilities previously utilized by the living unit. When the service request is eligible, the method includes automatically provisioning the network equipment to execute the service request based upon the information including the customer <u>identification</u> data and the network facilities previously used at the living unit.

BSPR:
The information includes customer <u>identification</u> data and customer facility data, and the information is maintained by the service order processing system without substantially altering the customer facility data.

BSPR:
In another aspect of the present invention, an administration system for a network includes anauxiliary database storing auxiliary data. The administration system also includes a service order processing system receiving a service request from a customer requesting service for a customer location, and determining whether the service request is provisionable responsive to the service request and predetermined criteria including whether the customer location matches a stored customer location stored by the service order processing system. When the service order processing system determines that the service request is provisionable, it automatically provisions customer facilities including at least one of a domain name, a user name, a customer network address, and an electronic mail address to execute the service request based upon information stored by the service order processing system. The information includes customer <u>identification</u> data and customer facility data, and the information is maintained by the service order processing system without substantially altering the customer facility data.

BSPR:
The present invention also features an administration method for a network including an attendant station for receiving service requests. The method includes receiving a service request from a customer at a living unit requesting service, and determining whether the living unit had previously been equipped with customer facilities for service. When the living unit has not been previously equipped with the customer facilities, the method includes automatically provisioning customer equipment to execute the service request based upon information including customer <u>identification</u> data and network facilities. The information is maintained without altering the network facilities when a subsequent disconnect request is received from the customer. When the living unit has been previously equipped with the network facilities, the method includes determining whether the service request corresponding to a living unit is eligible for provisioning using the customer facilities previously utilized by the living unit. When the service request is eligible, the method includes automatically provisioning the network equipment including at least one of a domain name, a user name, a customer network address, and an electronic mail address to execute the service request based upon the information including the customer <u>identification</u> data and the network facilities previously used at the living unit.

DEPR:
In addition, commercial <u>online</u> services such as America <u>Online,</u> CompuServe, the Microsoft Network, and Prodigy have their own "<u>chat</u>" systems allowing their members to converse.

DEPR:
Contrast to closed databases. The Web's open, distributed, decentralized nature stands in sharp contrast to most information systems that have come before it. <u>Private</u> information services such as Westlaw, Lexis/Nexis, and Dialog, have contained large storehouses of knowledge, and can be accessed from the Internet with the appropriate passwords and access software. However, these databases are not linked together into a single whole, as is the World Wide Web.

DEPR:
Such diversity of content on the Internet is possible because the Internet

provides an easy and inexpensive way for a speaker to reach a large audience, potentially of millions. The start-up and operating costs entailed by communication on the Internet are significantly lower than those associated with use of other forms of mass communication, such as television, radio, newspapers, and magazines. This enables operation of their own Web sites not only by large companies, such as Microsoft and Time Warner, but also by small, not-for-profit groups, such as Stop Prisoner Rape and Critical Path AIDS Project. Commercial online services such as America Online allow subscribers to create Web pages free of charge. Any Internet user can communicate by posting a message to one of the thousands of newsgroups and bulletin boards or by engaging in an on-line "chat", and thereby reach an audience worldwide that shares an interest in a particular topic.

DEPR:
Through the use of HTML, for example, Critical Path and Stop Prisoner Rape link their Web sites to several related databases, and a user can immediately jump from the home pages of these organizations to the related databases simply by clicking on a link. America Online creates chat rooms for particular discussions but also allows subscribers to create their own chat rooms. Similarly, a newsgroup gathers postings on a particular topic and distributes them to the newsgroup's subscribers. Users of the Carnegie Library can read on-line versions of Vanity Fair and Playboy, and America Online's subscribers can peruse the New York Times, Boating, and other periodicals. Critical Path, Stop Prisoner Rape, America Online and the Carnegie Library all make available content of other speakers over whom they have little or no editorial control.

DEPR:
Companies should also not ignore the importance of keeping the identity of their subscribers/customers private. Customer privacy can be important since Internet users can be contacted at little or no cost once their e-mail addresses have been obtained. Accordingly, a companies' intended use of e-mail addresses should be reviewed to confirm that its intended uses of the e-mail addresses is proper.

DEPR:
The CSOP translates service requests from SSNS into service order format and reverts. The RTS processor and its storage or memories store an inventory of data which includes address information, network facility data, identification data, user name data, domain name data, and Telephone Number data. Addresses, user names, domain names, and the like, are associated with specific network facility data that will serve the address. Customers are associated with the address, user name, domain name, and the like, being served by the network. Included in the customer information is the Telephone Number, identifier means, user name, and/or domain name, of the customer and the type of service which is provided. Customer data also includes information concerning the current and previous customers, service, and status of each.

DEPR:
The RTS provides capability to search by facility, address, identification data and provides facility information and status. The RTS maintains a real-time view of the network facilities inventoried in LFACS and COSMOS and/or SWITCH. RTS performs updates to the facility data resulting in activity from the facility inventory systems including LFACS and COSMOS/SWITCH. These may result from network rearrangements in the form of Engineering Work Orders, maintenance changes, database reconciliations and other service order activity.

DEPR:
Accordingly, the service request is first transmitted to RTS to determine whether the same facilities can be provisioned to the customer, without optimizing outside plant and office equipment facilities which would be performed by LFACS, SWITCH and COSMOS. RTS, therefore, eliminates, for example, the potential re-working or re-assignment of customer facilities under most circumstances which LFACS, COSMOS and SWITCH will attempt for each service order request. Thus, RTS minimizes, for example, the amount of unnecessary installation work with the realization that the customer facility assignments may not be optimal. In addition, RTS minimizes, for example, the amount of re-assignment of identification information such as telephone number data, user name data, domain name data, electronic address data, and the like.

DEPR:
At 154 the customer's credit history is checked using internal and external data sources. Through this step at 154 the process has been the same as that described in the current system illustrated in FIGS. 2 and 5. At 156 the service representative takes the customer service address information provided and uses the adjunct processor referred to as "RTS" 136 in FIG. 13 to verify the address, determine the working status of the address and determine the serving wire center and other common address information such as community and tax codes. Based on the wire center serving the customer, the service representative is able to determine what services are available to the customer. At step 158, the Assignment Section Information is retrieved from RTS including the network address such as cable, pair, binding post, time slot identification, electronic address, domain address, user name, and the like. From this information, a determination can be made whether the address is RTS eligible, what services may be offered to the customer, and whether the requested service may be provided over the existing network.

DEPR:
At 164 the selection of Telephone Number, or other identification data, is now made from RTS which contains all TNs/identification data and also assists in administration of those numbers. Administration of TNs includes the categories, status and availability of the TN. The TN, for example, is based on the wire center serving the area and the availability of the TN. RTS supports the selection of a preferred or special TN and/or identification data by the customer. At 166 the service representative recaps the service request to insure that the customer order accurately reflects the customer requirements as in step 24 in FIG. 3.

DEPR:
At 176 RTS places the service request in a log for further use and identification. This permits a check of the status of the request at any point during RTS processing.

DEPR:
These processing failures prevent RTS system 136 from readily assigning facilities (e.g., network facilities, user name, domain name, identification information, and the like) to the service request, and readily determining whether the RTS system 136 can provide such assignments or whether the assignment request must be passed on to the standard reassignment system via service order processor (SOP) 106. Since the basic operation of the RTS system 136 and the combination of the SOP system 106 and FACS system 113 is essentially the same, only those functions and tasks which are different will be discussed herein.

DEPR:
In particular, LMOS 128 will automatically access the LFACS 112, COSMOS 114 and/or SWITCH 118 data bases to retrieve the appropriate facility data for comparison as shown by reference numeral 282. This data may then be compared internally in LMOS 128, and the response then transmitted to the RTS work center personnel via RTS work center interface system 135 as shown by reference numeral 283. If inconsistencies still exist, work center personnel can further modify the facility data for acceptability by LMOS 128 for another attempt to verify facility assignments (e.g., domain name, identification data, user name, and the like), or can respond to the RTS system 136 with the correct information.

DEPR:
FIG. 18 is a block diagram illustrating the architecture of another embodiment of the invention for administration of a PSTN. In FIG. 18, RTS system 136 includes the capability of determining the consistency of the data being stored in the various data bases relating to facility assignment or service request subject matter, including, for example. In accordance with this embodiment, RTS system 136 will query one or more of the data bases stored in LMOS 128, LFACS 112, COSMOS 114, and/or SWITCH 118 as shown by reference numeral 293, as well as an auxiliary data base used to store, for example, domain name data, identification data, user name data, and the like.

DEPR:
On the other hand, MLT is also advantageously designed to implement testing of
logical data such as electronic mail, user name, domain name, identification
data, and the like. MLT performs automated testing of this network
identification data and other identification data to determine or assist in
the determination of working status of customer network facilities.

DEPR:
FIG. 20 is a flow-chart illustrating the methodology of the system of the
invention in performing service activation in accordance with the architecture
of FIG. 18. In FIG. 20, the RTS system determines whether a service request
(e.g., new telephone service, new electronic mail, domain name, user name,
identification information, and the like) requires manual intervention in step
310.

DEPR:
As shown in FIG. 21, RTS system 136 will, after assigning the facilities,
request verification by RTS verification system 141 as shown by reference
numeral 318. RTS verification system 141 will then, for example, test the
facilities of the central office 143 and outside plant as illustrated by
reference numeral 319. In addition, RTS verification system 141 will also test
other types of equipment, such as electronic address, domain name, user name,
identification data, and the like. Test results are then collected by RTS
verification system 141 as illustrated by reference numeral 320. RTS
verification system 141 will then respond to the RTS system 136 to indicate
whether the service request is in a working status as illustrated by numeral
321. The RTS verification system can be, for example, an automated service
assurance system.

DEPR:
As described above, the IVR functions may be utilized to confirm service
provisioning of identification related data, such as electronic mail, user
name, serial number, domain name, and the like. The IVR functions are also
used to confirm successful installation of the software associated with the
identification related data, such as electronic mail, user name, serial
number, domain name, and the like.

DEPR:
FIG. 22 is a block diagram illustrating the architecture of another embodiment
of the invention for administration of a PSTN and/or other network with users.
In FIG. 22, the RTS system 136 provides the capability of receiving service
requests including identification related data, such as electronic mail, user
name, serial number, domain name, and the like, from soft-dial order system
145 as indicated by reference numeral 324. Soft-dial order system 145 provides
limited dial tone capability for the subscriber via central office 143 as
shown by reference numerals 322 and 323. According to this arrangement, the
customer picks up a phone which is provided with soft dial tone service (which
may also be called "disconnected service" or "restricted service") and if the
customer is utilizing a phone which has been "disconnected", the customer may
only call the business office or 911. Since the "disconnected" phone has soft
dial tone capabilities, the customer's line is connected to originating
equipment on the switch. This originating equipment has an advanced
intelligent network (AIN) originating trigger set on it.

DEPR:
As described above, the soft-dial functions may be utilized to confirm service
provisioning of identification related data, such as electronic mail, user
name, serial number, domain name, and the like. The soft-dial functions are
also used to confirm successful installation of the software associated with
the identification related data, such as electronic mail, user name, serial
number, domain name, and the like.

DEPR:
FIG. 28 is an illustration of the ready-to-serve (RTS) architecture used to
provision various physical and logical network architectures. As illustrated
in FIG. 28, RTS 136 has access to various related systems 422-434 that utilize
electronic mail and related communication systems and which identify the user.
RTS 136 also has access to various trademark/tradename databases for
verification of user name availability. In this architecture, RTS 136 is used

to provision physical network facilities as well as logical network
facilities, such as <u>identification</u> related data, electronic mail, user name,
serial number, domain name, and the like. Note that this architecture allows
RTS 136 to assign/provision <u>identification</u> related, as discussed above in
detail. In addition, the above configurations can also be applied to the
various different embodiments described herein.

DEPU:
CLASS--Custom Local Area Signaling Service--CLASS services including Caller
ID, Repeat Call, Return Call, Call Block and Call Trace.

CLPV:
(c) when the service request is determined to be provisionable, automatically
provisioning customer facilities including at least one of a domain name, a
user name, a customer network address, and an electronic mail address, to
execute the service request based upon information including customer
<u>identification</u> data and customer facility data, and the information being
<u>maintained</u> without substantially altering the customer facility data; and

CLPV:
(d) when the service request is determined to be provisionable, automatically
provisioning customer facilities including at least one of a domain name, a
user name, a customer network address, and an electronic mail address, to
execute the service request based upon information including customer
<u>identification</u> data and customer facility data, and the information being
<u>maintained</u> without substantially altering the customer facility data; and

CLPV:
(c) when the service request is determined to be provisionable, automatically
provisioning customer facilities including at least one of a domain name, a
user name, a customer network address, and an electronic mail address, to
execute the service request based upon information including customer
<u>identification</u> data and customer facility data, and the information being
<u>maintained</u> without substantially altering the customer facility data; and

CLPV:
a service order processing system responsively connected to said soft-dial
order system, said service order processing system receiving the service
connect request from a customer requesting service for a customer location,
and determining whether the service connect request is provisionable
responsive to the service connect request and predetermined criteria, when
said service order processing system determines that the service connect
request is provisionable, automatically provisioning the customer facilities
including at least one of a domain name, a user name, a customer network
address, and an electronic mail address, to execute the service connect
request based upon information stored by said service order processing system,
the information including customer <u>identification</u> data and customer facility
data, and the information maintained by said service order processing system
without substantially altering the customer facility data.

CLPV:
(c) when the service connect request is determined to be provisionable,
automatically provisioning customer facilities including at least one of a
domain name, a user name, a customer network address, and an electronic mail
address, to execute the service connect request based upon information
including customer <u>identification</u> data and customer facility data, and the
information being maintained without substantially altering the customer
facility data.

CLPV:
(b) when the service connect request is determined to be provisionable,
automatically provisioning customer facilities including at least one of a
domain name, a user name, a customer network address, and an electronic mail
address, to execute the service connect request based upon information
including customer <u>identification</u> data and customer facility data, and the
information being maintained without substantially altering the customer
facility data.

CLPW:

when said service order processing system determines that the service request is provisionable, automatically provisioning customer facilities including at least one of a domain name, a user name, a customer network address, and an electronic mail address, to execute the service request based upon information stored by said service order processing system, the information including customer identification data and customer facility data, and the information maintained by said service order processing system without substantially altering the customer facility data, and

CLPW:
when said service order processing system determines that the service request is provisionable, automatically provisioning customer facilities including at least one of a domain name, a user name, a customer network address, and an electronic mail address, to execute the service request based upon information stored by said service order processing system, the information including customer identification data and customer facility data, and the information maintained by said service order processing system without substantially altering the customer facility data, and

CLPW:
when said service order processing system determines that the service request is provisionable, automatically provisioning customer facilities including at least one of a domain name, a user name, a customer network address, and an electronic mail address, to execute the service request based upon information stored by said service order processing system, the information including customer identification data and customer facility data, and the information maintained by said service order processing system without substantially altering the customer facility data;

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image |

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DOCUMENT-IDENTIFIER: US 6141653 A
TITLE: System for interative, multivariate negotiations over a network

BSPR:
Business entities have tried for years to adapt computers and networks for use in sophisticated intercompany negotiations for commercial purchase and sales transactions, but with results that usually fall far short of expectations. Early mainframe computer attempts, for example, usually involved one corporation's allowing its existing suppliers and quantity buyers to connect to its internal private, proprietary network, using specially written locally developed application programs and private, proprietary network connections. These private systems were usually extremely costly to develop and maintain (often costing in the multi-millions of dollars) and very often did not meet all the needs and changing requirements of the participating businesses. Since many corporations had different internal networks and computer systems, considerable effort went into working around incompatibilities. Additionally, these systems had to be based on already existing, close relationships between buyers and sellers and usually were also based on previously negotiated agreements. Thus, the systems did not help in searching for information about new buyers and sellers, nor with the evaluation or negotiation processes, nor with the documenting of those processes from the beginning. They were not interactive, but typically batch processing systems, and usually accepted alphanumeric text only, not the inclusion of graphics or sound files. They usually addressed ongoing relationships previously worked out manually, for which extremely expensive custom systems were developed at buyers' or vendors sites.

BSPR:
With the advent of the Internet and the World Wide Web (Web), the exchange of information amongst companies was greatly enhanced, with the use of Web technologies. However, even with chat rooms, bulletin boards, and forum websites most of this data and information exchange is simply that--not a multivariate negotiations process nor an online, electronic commerce process.

BSPR:
While some of the Web devices, such as chat rooms and bulletin boards are interactive, each essentially allows two or more people to have conversations over the Internet, in the same way they might speak over the telephone or several might speak over an old-fashioned party line telephone. While the chat room or bulletin board may store these conversations, no other action takes place as a result of the process. Consequently, privacy and security questions aside, these are not effective devices to use to negotiate a number of variable terms, reach agreement on each and document the results. Just as telephone conversations about negotiations can be recorded on tape, but do not produce a contract document on paper, online chat or bulletin board discussions about negotiations cannot easily be used to make a contract on the network, even if they are archived.

BSPR:
While this has been an advance for internal communications over a private network, it does not usually provide any interactive, iterative, multivariate negotiations capabilities and it requires personnel familiar with HyperText Markup Language (HTML) to create hypertext links in documents to create and maintain the "internal" Web pages. If a more interactive approach is desired, an Information Technology (IT) specialist in some form of scripting, such as CGI, or PERL is needed who can create forms documents and procedures to allow users to ask for information from the Web server. Again, this is custom programming at the user's site, and still does not provide multivariate negotiations or commerce capabilities.

BSPR:
The companies that do provide more of a business to business focus over the Internet usually do so by offering special enterprise application server software 19s, as shown in FIG. 2a (Prior Art) for installation inside an enterprise's private corporate network. These programs fit into a category of software called front-office applications or application servers--so called because they sit close to the user end inside an enterprise and are customized to interface with the back-office applications 21 inside the enterprise, which include commercial products from software suppliers as well as custom developed applications that handle internal business functions such as inventory tracking, financials, human resources and supplies, and similar Enterprise Resource Planning (ERP) systems.

BSPR:
As seen in FIG. 2a (Prior Art), three separate corporations 16a, 16b and 16c are shown using the services of an enterprise commerce site provider 18. Each corporate site 16 has a firewall 16af, 16bf, and 16cf. Firewalls are a combination of hardware and software designed to prevent unwanted intrusion into a private corporate network by unauthorized personnel. A firewall usually puts a specially programmed computer system between its internal network and the Internet. It also prevents the company's internal computer users from gaining direct access to the Internet, since the access to the Internet provided by the firewall computer is usually indirect and performed by software programs known as proxy servers.

BSPR:
Still in FIG. 2a (Prior Art), note that the typical enterprise commerce site provider 18 must have each customer 16 install the provider's application server software 19s, on an application server computer 19h inside the corporation's private network 14. Thus, in order to have access to the commerce site, corporation 16a would have an individual working at a desktop computer 08, for example, connect to the corporation's internal Web server computer(s) 20h over internal private network 14. The corporate employee thus accesses the enterprise commerce site provider 18 through his or her corporation's Web server computer 20h, running the enterprise commerce site

provider 18's application server software 19s. From the Web server 20h,
application server software 19s, possibly running on its own application
server computer 19h communicates through the firewall 16af with enterprise
commerce site provider 18, and ultimately, through that site to other
corporate subscribers to the enterprise commerce site provider, 18 usually
over a private leased network 11. The corporation's internal network 14 links
the desktop computers 08 with not only the e internal a application server 19,
but also to the internal corporate back-office internal computers 21.

BSPR:
Credit cards are issued to buyers relatively easily, but merchant identifiers
(merchant ID's), which allow the merchant to accept and process the cards are
not as easy to obtain, especially for online transactions, and online
merchants are usually charged premium processing fees to authorize online
processing and the handling of international transactions.

BSPR:
In addition, obtaining real time card authorization for international
transactions online is a major undertaking, because online card processing and
bank to bank connectivity does not exist on the Internet in many countries.
Also, transactions denominated in most non-G7 currencies are not likely to be
processed in real time online because the international banking system is not
capable of doing real time, online, Internet currency transactions. Consumers
who travel and use credit cards to make payments in other countries, and other
currencies, may think these transactions are being handled online, but they
are not. Most of the currency exchange processing is done by the connecting
banks offline, and most of it that is done electronically is done on private
bank and interbank networks.

BSPR:
Many of the major credit card issuers also do not allow a merchant to use its
merchant identifier (ID) to process transactions on behalf of related
entities. This is a significant problem for mall operators, in particular. To
add a new store to the mall, the mall Website operator must ask the store to
get its own merchant ID, offline. It can take weeks to get a merchant ID, but
without one, the seller in the mall cannot accept any online transactions at
all.

BSPR:
For international processing there are other payment methods available, but
these are usually done manually or offline. For example, wire transfers allow
bank-to-bank payments for international transactions in any tradable currency.
However, these are done over private bank networks and usually between
companies which have already established a purchasing relationship--i.e. for
MRO or administrative purchasing. Wire transfers are used more often in
international trade than company checks, because the processing time for a
wire transfer is faster than check processing and the fees charged by the
banks are often lower. The participating banks usually handle the currency
conversion as part of the process. Again, however, this usually requires some
fairly sophisticated interbanking networks in the applicable countries.

BSPR:
Letters of credit (L/C) are another payment vehicle used for international
transactions, once they have been negotiated. It usually takes 6 weeks or
longer to negotiate one. Negotiations take so long because the issuing bank
(the buyer's bank) assumes the total credit risk by agreeing absolutely to pay
the seller so long as the transaction documents match the terms of the letter
of credit itself. Most disputes about the payment of letters of credit have to
do with discrepancies in the L/C terms, including such simple things as
typographical errors. As seen in FIG. 2c (Prior Art) heretofore, letters of
credit were negotiated primarily by telephone calls and facsimile exchanges
between a buyer P1 and a bank P2 which can easily result in both substantive
and typographical errors. Banks which process the letters of credit, often use
a private network known as the SWIFT system, which provides 128 bit encryption
for data sent between points on the SWIFT network. The United States
Department of Commerce continues to regulate encryption controls required by
US laws, and limits this full level of encryption to US and Canadian banks.
Other systems are allowed to use 56 bit encryption outside the US and Canada.

BSPR:
Returning now for a moment to FIG. 2b (Prior Art), as mentioned above,
Websites such as retail malls 24 or standalone Websites are used by some
corporations which sell at retail. While many tools exist to allow companies
to design Websites, there are not as many that allow a company to design one
for automatic integration into a Website in a mall or with online catalogs.
Since most companies want to maintain control over the appearance of their
corporate and brand names, those mall or catalog sites that do provide Web
tools for their business subscribers, usually do not provide complete common
interfaces or templates for the companies to use, nor do they integrate the
sites with multiple features and services. Instead, they usually only provide
access to a shopping cart 26 feature and a secure credit card 30 payment
feature with a catalog product and price list that is searchable. Some may
also provide manual help to the seller in listing its Website in relevant
search engines used on the Internet. Normally, however, it is the seller's
responsibility to do so. In either case, the registration with search engines
is usually done manually. Some may also require the seller to arrange for
payment processing separately, offline. As mentioned before, obtaining a
merchant ID can take weeks, thus limiting what the seller can do online until
then.

BSPR:
Thus, most existing electronic commerce sites are designed to work with
existing proprietary banking networks such as the United States VISA.TM. and
MC MASTERCARD.TM. real-time card authorization and processing interbanking
systems. As noted above, these are known as SWIFT-compatible private networks
which use 128 key encryption for security. This often limits a buyer or
seller's market potential unnecessarily. Since many countries do not have
banking systems comparable to the SWIFT interbanking system, payments in such
countries may only be made by manually negotiated letters of credit and so on.
It can take from 4-6 weeks simply to negotiate the terms of a letter of
credit, when using the same manual techniques of phone calls and fax machines.
In a global economy, when manufacturers in one country may want to source
parts and components from the Pacific rim, sell them in the United States,
Europe or South America, or Pacific Rim, a system that does not address the
complexities of international purchasing is very limiting.

BSPR:
The few enterprise electronic commerce providers that go beyond the mall
concept do so with the addition of a governor or administrator feature which
coordinates with the enterprise application servers. The governor sets up and
administers the rules for the site and can act as a broker. This usually
entails a customized, specially programmed matching of participating
companies' computer systems to coordinate authorization and payment approval
so orders flow between firms. However, this technology can cost millions and
it can take as much as two years to program the computers and set up the
necessary processes and equipment at all the participating company sites. Most
of the components for doing this are sold by major computer hardware and
software vendors who also sell application server software, hardware, and
consulting services to install the "front-end" application server at the
participating business's site. Thus, while the Internet may be used to connect
the companies participating, most of the work is done by the application
server software installed on private, proprietary networks at the various
company sites, and the Internet serves as a simple external telecommunications
link.

BSPR:
An other complication of some of the seller--centric and enterprise
application server products designed for commerce is that they may only work
with certain forms of electronic data interchange (EDI) technology, which is 7
to 10 times more costly to use than other methods. Existing EDI technologies
use private networks and charge per c all and by the bit of information
transmitted. Depending on the approach used attempting to change such systems
to use other forms of data interchange can be very costly, because of the
number of installed software application servers at the participating company
sites which must b e radically changed. Because of the expense associated with
most EDI technologies, only about 2% of companies worldwide attempting to do
business over a network use them.

BSPR:
Still another aspect of the present invention is that, in a preferred
embodiment, all demographic, payment and negotiation information is
transmitted using secure sockets over an open architecture network such as the
Internet's Terminal Control Protocol-Internet Protocol (TCP-IP) network, thus
eliminating the need for more expensive private leased lines or proprietary
networks for the iterative bargaining between buyers and sellers amongst
themselves or for communications with the sponsor.

BSTL:
                                                   Enterprise server/mall Website
Bank/credit card processor _____ 1. transport
the credit card infor- 2. verify the card is legitimate and the mation
securely to processor amount exists; send authorization to or bank over a
private network; online merchant over the private network; 3. post the item
details back to 4. transport item details to card issuer the bank/credit card
processor for debit to the holder's account over over, the private network;
private network 5. make necessary currency translation (usually offline) 6.
credit the merchant account 7. deduct significant fees, usually a percentage
or more per transaction from the merchant account; 8.archive details.

DEPR:
The present invention allows the creation of one or more sponsored communities
of any number of types for conducting iterative negotiations over a network.
As seen in FIG. 1a, the network used is the present-day Internet with TCP-IP
protocols and formats, but those skilled in the art will appreciate that it
could also be implemented on any future open network(s) which might replace or
supplement the Internet, or it could be implemented inside current, private
networks within a corporation, if desired.

DEPR:
The above aspect of the present invention is particularly important in
business to business negotiations. Use of the Internet architecture helps both
sponsors and participants keep their separate brand identifications through
their individual URLs and Websites, and the use of http addressing and
protocols enables near-instantaneous pulling of text and object files in
response to any queries, whether in the same country or around the world.

DEPR:
FIG. 1m, shows the external functions 211 of the present invention. Reporting
211-02 is one type of external function 211. When participants have concluded
a negotiation, one or both of them may wish to have the final documents and
current status of the deal reported back to them. The present invention
protects the documents with separate user names, passwords and access levels
for each inquirer. That is, a sponsor may be able to see the broadest or
deepest levels of a transaction in the community using its master user name
and password. A seller may be able to see all transactions relevant to it,
proposed orders pending for it from one or all members of the community, using
sellers own user id and password. A buyer may only be able to see orders it
has proposed or concluded with one or all members of the community, using
buyers separate user name and password.

DEPR:
Unique id's feature 222-02 is used to insure the proper data is found and
transmitted. That is, the present invention associates unique identifiers
(id's) with each sponsor, participant, and type of data or transaction. Since
database functions 222 are integrated directly with the other functions of the
invention, faster processing and updating of the database is enabled.

DEPR:
A more detailed view of multivariate negotiations engine system 02's site is
shown in FIG. 1d. As seen there, the Website 200 includes Webserver hardware
210w, IP firewall 203f, server farm 230 and database server hardware 220. As
shown in FIG. 1d, most of the functions needed to implement the present
invention are implemented outside IP firewall 203f as part of the Webserver
software used with Webserver hardware 210w. In this embodiment, the database
server software 222 and the data 225 are the only items behind IP firewall
203f. Those skilled in the art will appreciate that all of multivariate

negotiations engine system 02's functions could also be placed behind a firewall if virtual private networks (VPN) or tunneling or similar techniques known in the art used for implementation.

DEPR:
Once the buyer has sent its proposal, the seller is alerted by the system by email (as seen in FIG. 20) that a proposal is available on the system for review and negotiation. In one embodiment, the email notification includes links to multivariate negotiations engine system 02's site. Once the seller (using its browser) becomes aware from the e-mail that a proposal is available it jumps immediately, using the link mentioned above in the email, to view a browser screen such as that shown in FIG. 16, which shows a proposed order with payment by letter of credit from the above buyer. According to the present invention, the seller must still use its user id and password for such viewing, thus preserving security of the data. In this approach, the email notification does not contain any sensitive or confidential data. It serves simply as a notifier. Note that email notices of the present invention do not contain any confidential information. Confidential data is transmitted securely to the browser through SSL techniques. Access to the data is by user name and password.

DEPR:
With reference now to FIG. 27, an overview block diagram illustrating the international transaction processing features of the present invention is shown. As seen there, multivariate negotiations engine system 02 is connected over an international network IN, such as the Internet 04. Those skilled in the art appreciate it could also be a proprietary network or virtual private network, if desired. For international processing, sponsored community CC might be a community of sellers of electronic components 08s located in Pacific rim countries. Prospective buyers 08b can be located anywhere in the world, such as Russia, Europe, Africa, South America, North America, and so on.

DEPR:
For production purchasers, sample orders can be placed at the outset of vendor selection processes by a production buyer. If the sponsor desires to include this feature in the community, it will make arrangements with each seller for the payment for the samples. In order to enable a seller to "go live" immediately upon the creation of the seller's Website, a sponsor might authorize payments for such sample purchases through the Sponsor's own merchant id or similar arrangements for online payment processing. This eliminates the need for the seller to wait several weeks for a merchant Id in order to accept credit card payments for small value transactions such as sample orders.

DEPR:
Typical sponsor vendor database Dbb includes text, images, sound files, etc. When information from one or more of these databases is called for, the present invention pulls such associated files and graphics for display to the requestor. Typical sponsor 06 databases 225 also include demographic data about registered sellers, such as company name, title, and locations. If certificates of authenticity, customer identification numbers, or electronic signatures such as those conventionally used for non-repudiation purposes are collected, they can also be stored in a sponsor database 225. Consequently, the services available from a typical sponsor 06 using the present invention, can make production purchasing more efficient for a buyer and provide direct access to potential buyers for all registered sellers.

DEPR:
FIG. 5b, for example is an illustrative database entry as it might be stored for a listing in a vendor database DBb. In this example, login is shown as 579--the unique ID assigned by multivariate negotiations engine 02 to this particular vendor. The remote web authoring template chosen by this vendor is shown as template 4, the vendor's letter of credit bank information is listed, and so on.

CLPR:
15. The apparatus of claim 1, wherein the network comprises a private network.

CLPR:
16. The apparatus of claim 1, wherein the network comprises a virtual private network.

CLPR:
34. The method of claim 20, wherein the step of establishing communications paths over a network further comprises the step of using a private network.

CLPR:
35. The method of claim 20, wherein the step of establishing communications paths over a network further comprises the step of using a virtual private network.

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image |

☐ 8.   Document ID: US 5625818 A   Relevance Rank: 41

L4: Entry 11 of 11   File: USPT   .   Apr 29, 1997

DOCUMENT-IDENTIFIER: US 5625818 A
TITLE: System for managing local database updates published to different online information services in different formats from a central platform

BSPR:
Presently, information publishers take portions of their content in whatever form they have it--typically a collection of files in the publisher's filing system--and from that content produce directly a script of some sort, for example in a scripting language such as Rainman Pro. characterized by numerous embedded commands. Publishers have to manually keep track of the ID numbers that they use on a particular host. The same manual process is performed from scratch for each different service that the publisher publishes on. Not only is there no one tool that can support a publisher across each of a variety of platforms, but there does not appear to be so much as a tool that can support a publisher on even a single platform (i.e., America Online, Compuserve, Prodigy). The task is left very much up to each publisher to construct an update script based on various documents, following all of the rules of the applicable scripting language, sometimes literally keeping a spiral notebook to keep track of IDs used on various services.

DEPR:
Although the particular user interface employed by the IP and CS versions of the electronic publishing tool is not important to the present invention, an exemplary user interlace will be described in relation to FIG. 2 through FIG. 11. If the central service is an online service, human interface considerations may recommend an interface that closely resembles the subscriber interface of the online service. Likewise, although the program functions described in relation to the foregoing figures are exemplary of functions implemented by the electronic publishing tool, some functions described may not be required and other functions may be added depending upon particular circumstances. The following description assumes that the types of content objects supported by the electronic publishing tool include at least text documents, folders and enclosures. Other types of content objects, including books, pamphlets, chats, forms, etc., may or may not be supported.

DEPR:
Referring to FIG. 8, the Reference Info command brings up the Reference Info dialog. This dialog allows a user to set the "lifetime" of a selected reference, and if the user desires, the lifetime of all other references to the same document. Information relating to publication to an online or other service, including the upload status and host ID, is shown in the central

version of the application.

DEPR:
Persistent objects form the basis of the electronic publishing tool.
Persistent objects are objects that are managed by ObjectMan and are saved on
disk in a database. As will be described more fully hereinafter in relation to
FIG. 14, they are all descended from a base class Document and are identified
by an object identifier, or OID, a globally unique ID which is permanently
associated with the object. Other objects can refer to a persistent object by
its OID until the object is actually required in memory.

DEPR:
The general services performed by Object Man include generating globally
unique IDs for generic use. Object Man also provides the ability to access a
specified object, and the ability to iterate through an object's interested
parties. A further important general service performed by Object Man is the
broadcasting of changes to objects that have registered an interest in a
persistent object.

DEPR:
In an exemplary embodiment, ObjectMan provides two spaces of globally unique
IDs, OIDs to identify persistent objects and UniqueIDs for general use. The
two need not be compatible with each other.

DEPR:
UniqueIDs are a set of globally unique IDs which can be used for whatever
purpose an object desires. In an exemplary embodiment, they are more
"light-weight" than OIDs. A new UniqueID may be obtained from ObjectMan by
calling GetNewUniqueID.

DEPR:
A persistent object is identified by its OID, a globally unique ID that is
permanently attached to the object. Objects can refer to persistent objects by
their OID and use the object retrieval function when they need the persistent
object itself. OIDs are never reused. ObjectMan keeps a running count of calls
to retrieve a persistent object to determine when it can delete the object
from memory. If the usage count is not positive, ObjectMan may delete the
object from memory as needed. A subsequent request for a deleted object will
cause the object to be restored from the database.

DEPR:
The kInterestedThings mode tells interested objects that the change has just
taken place. The kSync mode sends the change notice to remote copies of the
source object only. The change notices sent with this mode usually contain
data private to the object itself. ThekInterestedThingsAndSync mode is a
combination of the kInterestedThings and the kSync mode. It sends the change
notice to both local interested objects and to the remote copy of the source
object.

DEPR:
Because the electronic publishing tool is designed to publish content to
multiple platforms, there must be a separation between what information is
kept generically, and what information is only used to support publishing on a
particular platform. Within the electronic publishing tool, a particular
publishing platform is referred to as a service, and service-specific objects
are used to support the information needed for a particular content object on
a particular service. Ideally, all of the content is part of the generic
object, while the service-specific objects are used mainly to support the
publishing process for that platform, such as the service's local ID for an
object, or its upload status. A protocol is provided for associating
service-specific objects with the generic object.

DEPR:
Documents are intended to represent content generically, across all possible
publishing platforms. For information specific to a platform, such as a host
ID, a ServiceInfo subclass is provided, descended from Document. There will
typically be one ServiceInfo subclass for each Document subclass, for each
publishing platform.

DEPR:
Because Application is not a subclass of Document. Application is not
persistent, cannot send or receive change notices, etc. all of which are
provided for by Document. For this reason a <u>private</u> sub-object AppPrefs, which
is a Document, is used to hold persistent information for Application. It is
accessed only via Application. AppPrefs is recorded in ObjectMan as the
"special" OID, one that can be retrieved when the application starts up
without a regular OID. Thus, AppPrefs is the bootstrap object. AppPrefs
contains a list of IPs, a trash folder OID, and various other values that need
to be preserved from session to session, and serves as the root of the
interested-party hierarchy.

DEPR:
Call the following functions to use ObjectMan to retrieve persistent objects
and to get new unique <u>IDs</u>.

DEPR:
Optionally pass in the class <u>id</u> of the expected document type. ObjectMan will
signal an error if the actual type is not a subclass of the expected type.

DEPR:
Returns the class <u>ID</u> of a particular object.

DEPR:
Return the <u>ID</u> for a particular class, e.g., BSDocument::ClassID() (instead of
using the underlying constant).

DEPR:
Good UIs will call this to get a list of any warnings or errors that might
arise from trying to insert an object into this folder. virtual void
RemoveByID (BSUniqueID <u>id,</u> Boolean deleteItem);

DEPL:
Unique <u>IDs</u>

DEPV:
GetNewUniqueID returns a globally unique BSUniqueID. The value can be used for
whatever purpose the object needs. These <u>IDs</u> are more lightweight than BSOIDs.

DEPV:
virtual void Save (BSSaveHandler* aSaveHandler, PartitionID
<u>id</u>=kAllPartitions);

DEPV:
virtual void Restore (BSRestoreHandler* aResoreHandler, PartitionID
<u>id</u>=kAllPartitions);

DEPV:
virtual void DoneWithRestore (PartitionID <u>id</u>=kAllPartitions);

DEPV:
FolderIndex FindlndexForID (BSUniqueID <u>id</u>);

DEPV:
virtual void RepositionByID (BSUniqueID <u>id,</u> FolderIndex newIndex,
BSFolderRegion region=kFolderBody);

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image |

☐ 9. Document ID: US 5684984 A   Relevance Rank: 41

DOCUMENT-IDENTIFIER: US 5684984 A
TITLE: Synchronization and replication of object databases

BSPR:
Presently, information publishers take portions of their content in whatever
for they have it--typically a collection of files in the publisher's filing
system--and from that content produce directly a script of some sort, for
example in a scripting language such as Rainman Pro, characterized by numerous
embedded commands. Publishers have to manually keep track of the ID numbers
that they use on a particular host. The same manual process is performed from
scratch for each different service that the publisher publishes on. Not only
is there no one tool that can support a publisher across each of a variety of
platforms, but there does not appear to be so much as a tool that can support
a publisher on even a single platform (i.e., America Online, Compuserve,
Prodigy). The task is left very much up to each publisher to construct an
update script based on various documents, following all of the rules of the
applicable scripting language, sometimes literally keeping a spiral notebook
to keep track of IDs used on various services.

DEPR:
Although the particular user interface employed by the IP and CS versions of
the electronic publishing tool is not important to the present invention, an
exemplary user interface will be described in relation to FIG. 2 through FIG.
11. If the central service is an online service, human interface
considerations may recommend an interface that closely resembles the
subscriber interface of the online service. Likewise, although the program
functions described in relation to the tool, some functions described may not
be required and other functions may be added depending upon particular
circumstances. The following description assumes that the types of content
objects supported by the electronic publishing tool include at least text
documents, folders and enclosures. Other types of content objects, including
books, pamphlets, chats, forms, etc., may or may not be supported.

DEPR:
Referring to FIG. 8, the Reference Info command brings up the Reference Info.
dialog. This dialog allows a user to set the "lifetime" of a selected
reference, and if the user desires, the lifetime of all other references to
the same document. Information relating to publication to an online or other
service, including the upload status and host ID, is shown in the central
version of the application.

DEPR:
Persistent objects form the basis of the electronic publishing tool.
Persistent objects are objects that are managed by ObjectMan and are saved on
disk in a database. As will be described more fully hereinafter in relation to
FIG. 14, they are all descended from a base class Document: and are identified
by an object identifier, or OID, a globally unique ID which is permanently
associated with the object. Other objects can refer to a persistent object by
its OID until the object is actually required in memory.

DEPR:
The general services performed by Object Man include generating globally
unique IDs for generic use. Object Man also provides the ability to access a
specified object, and the ability to iterate through an object's interested
parties. A further important general service performed by Object Man is the
broadcasting of changes to objects that have registered an interest in a
persistent object.

DEPR:
In an exemplary embodiment, ObjectMan provides two spaces of globally unique
IDs, OIDs to identify persistent objects and UniquelDs for general use. The
two need not be compatible with each other.

DEPR:
UniqueIDs are a set of globally unique IDs which can be used for whatever
purpose an object desires. In an exemplary embodiment, they are more

"lightweight" than OIDs. Anew UniqueID may be obtained from ObjectMan by
calling GetNewUniqueID.

DEPR:
A persistent object is identified by its OID, a globally unique ID that is
permanently attached to the object. Objects can refer to persistent objects by
their OID and use the object retrieval function when they need the persistent
object itself. OIDs are never reused. ObjectMan keeps a running count of calls
to retrieve a persistent object to determine when it can delete the object
from memory. If the usage count is not positive, ObjectMan may delete the
object from memory as needed. A subsequent request for a deleted object will
cause the object to be restored from the database.

DEPR:
The kInterestedThings mode tells interested objects that the change has just
taken place. The kSync mode sends the change notice to remote copies of the
source object only. The change notices sent with this mode usually contain
data private to the object itself. ThekInterestedThingsAndSync mode is a
combination of the kInterestedThings and the kSync mode. It sends the change
notice to both local interested objects and to the remote copy of the source
object.

DEPR:
Because the electronic publishing tool is designed to publish content to
multiple platforms, there must be a separation between what information is
kept generically, and what information is only used to support publishing on a
particular platform. Within the electronic publishing tool, a particular
publishing platform is referred to as a service, and service-specific objects
are used to support the information needed for a particular content object on
a particular service. Ideally, all of the content is part of the generic
object, while the service-specific objects are used mainly to support the
publishing process for that platform, such as the service's local ID for an
object, or its upload status. A protocol is provided for associating
service-specific objects with the generic object.

DEPR:
Documents are intended to represent content generically, across all possible
publishing platforms. For information specific to a platform, such as a host
ID, a ServiceInfo subclass is provided, descended from Document. There will
typically be one ServiceInfo subclass for each Document; subclass, for each
publishing platform.

DEPR:
Because Application is not a subclass of Document, Application is not
persistent, cannot send or receive change notices, etc., all of which are
provided for by Document. For this reason a private sub-object AppPrefs, which
is a Document, is used to hold persistent information for Application. It is
accessed only via Application. AppPrefs is recorded in ObjectMan as the
"special" OID, one that can be retrieved when the application starts up
without a regular OID. Thus, AppPrefs is the bootstrap object. AppPrefs
contains a list of IPs, a trash folder OID, and various other values that need
to be preserved from session to session, and serves as the root of the
interested-party hierarchy.

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image |

☐ 10. Document ID: US 5779549 A   Relevance Rank: 40

L4: Entry 9 of 11   File: USPT   Jul 14, 1998

DOCUMENT-IDENTIFIER: US 5779549 A
TITLE: Database driven online distributed tournament system

DEPR:
FIG. 1 shows a distributed electronic tournament system 100 with a central
controller 102 connected to a number of input/output (I/O) devices, 104 and
106, in the present invention. The input/output device may be a video gaming
console, a personal computer, handheld electronic device, and the like. The
central controller may be a workstation, a minicomputer, or other type of
computation device, typically in the form of a server computer connected to a
public or <u>private</u> network. The I/O devices are remotely located from the
central controller to allow participation in a tournament to be distributed.
The I/O devices preferably are connected to the central controller, at least
when the I/O devices are involved in games. Such connection may be through a
wireless telecommunication network or through a ground-based network 108, such
as the Internet. While online, the I/O device typically communicates with the
network via a public or <u>private</u> switched network such as the circuit switched
public telephone network. The central controller has software which it uses to
manage the tournament. In one preferred embodiment, the I/O devices are
personal computers connected to an online service such as America Online. The
central controller is a workstation computer on America Online that
coordinates the tournament activities.

DEPR:
In one preferred embodiment, the central controller also prevents those
players not qualified to play from participating in a tournament. The central
controller generates a game session password which is distributed only to
qualified players. Without the correct password, non-qualified players are
unable to compete. In one preferred embodiment, players must enter an
electronic "chat room" (of the type commonly found on most commercial <u>online</u>
systems) in order to obtain the game questions. Access to this room is
password protected so that only authorized players are allowed access to the
questions. The central controller might also enforce qualification rules by
terminating a player's <u>online</u> connection, or by merely preventing a
non-qualified player from winning any prize.

DEPR:
There are many different ways for a player to pay his entry fee. In one
preferred embodiment, the process steps 204 responsive to payment of an entry
fee include the step of providing a number of payment options for the player
before he participates in a game session. Payments may be processed
non-electronically, such as with cash or checks, or may be communicated
electronically with the online transmission of credit card number, digital
cash, debit card number, or bank account information for electronic fund
transfers. Players may also register any one of the above electronic payment
methods with the central controller and then simply use a unique payment
<u>identification</u> number for future transactions. A player, for example, could
<u>register his</u> credit card number and a password with the central controller.
From that time forward, the player would only have to present his password for
payment. The central controller would look up the password to find the
player's credit card number and would bill the card for the tournament entry
fee. This preferred embodiment has the added advantage of eliminating the need
for secure transmission of the payment information. A hacker intercepting the
player's payment communication with the central controller would get only the
password, not the more valuable credit card number. The password has little
value as any winnings obtained from the use of another player's account would
be credited to that player's credit card and thus would not benefit the
hacker.

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image |

☐   11.   Document ID: US 6018768 A   Relevance Rank: 40

L4: Entry 3 of 11   File: USPT   Jan 25, 2000

DOCUMENT-IDENTIFIER: US 6018768 A
TITLE: Enhanced video programming system and method for incorporating and displaying retrieved integrated internet information segments

BSPR:
Today, the capabilities of computers to provide massive amounts of educational and entertainment information has exploded with the Internet. The Internet has the power to transform society through unprecedented levels of information flow between members. Currently, on-line systems offer a variety of different services to users, including news feeds, electronic databases (either searchable by the user directly on the on-line system, or downloadable to the user's own computer), private message services, electronic newsletters, real time games for play by several users at the same time, and job placement services, to name a few. However, today, most on-line communications occur merely through text. This currently stands in great contrast to the audio/visual presentation of the alternative electronic medium, television. However, it is expected that as multi-media's incessant growth continues, audio/visual programs will proliferate and text will become less and less dominant in the on-line environment. Even though these programs will be introduced, the Internet, will remain essentially user unfriendly due to its very massiveness, organization, and randomness. Simply stated, there is no order or direction in the Internet. Specific pieces of information are many times hard to find, and harder yet, is the ability to put that piece of information into a meaningful context.

DEPR:
Another preferred embodiment of the system, shown in FIG. 4, does not depend on, or even use, the VBI. In this preferred embodiment, the system will run an online service over the Internet 20. This service will be in the form of an Internet Web site 62 that provides a user-interface to a database 78 and to one or more associated data servers 90. The service will provide member-accounts to TV broadcasters 66 who sign up to use the system of the invention in conjunction with their broadcasts. Each member broadcaster will enter the service at their computer 70 through Web browser software 74 using their member account by entering various identification and password information. Once within their account, the member will be provided with a graphical user interface for pre-scheduling URLs for transmission to users 118 over a direct Internet connection 94 at particular times of day. The same user interface, or a variation on it, can be used by broadcasters for live transmission 82 of URLs to users at the same time as a broadcast 86.

DEPR:
The database 78 provides the Link File records for upcoming time periods to a server 90, which may be one server or a distributed network of server programs on multiple computers across the network, to be utilized for scaling to large national or global audiences. The server 90 provides the Link File records, including the URLs, to the user's personal computer 16, which is connected via a network. Examples of possible networks include the public Internet 94, a direct private network, or even a wireless network.

DEPR:
This educational embodiment integrates Web content and other media with collaborative groupware functionality to create an interactive environment for students and teachers. In this embodiment, the student can receive a traditional video lesson through a frame in his or her Web browser, or from a television. Simultaneously, the present invention provides separate frames, an example of which is shown in FIG. 8, in the browser displaying: (1)Web pages 176 automatically delivered to each student's desktop with information or exercises that complement the video presentation; (2) a chat dialogue frame 168 for conversing with the instructor and/or other students online; and (3), an interactive playlist 164 of Web pages and questions comprising the lesson.

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image |

Generate Collection

Terms	Documents
private and l3	11

Display   [50] Documents, starting with Document: [11.]

Display Format: [KWIC]   Change Format

WEST

| Help | Logout | Interrupt |

| Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences |

Search Results -

Terms	Documents
l4 and second	9

Database:

| US Patents Full-Text Database |
| US Pre-Grant Publication Full-Text Database |
| JPO Abstracts Database |
| EPO Abstracts Database |
| Derwent World Patents Index |
| IBM Technical Disclosure Bulletins |

Refine Search: | l4 and second | | Clear |

Search History

Today's Date: 3/15/2001

DB Name	Query	Hit Count	Set Name
USPT	l4 and second	9	L5
USPT	private and l3	11	L4
USPT	l1 and l2	27	L3
USPT	id or identification	192299	L2
USPT	chat same online	37	L1

WEST

| Generate Collection |

Search Results - Record(s) 1 through 11 of 11 returned.

☐   1.   Document ID: US 5818836 A   Relevance Rank: 72

L4: Entry 7 of 11   File: USPT   Oct 6, 1998

DOCUMENT-IDENTIFIER: US 5818836 A
TITLE: Method and apparatus for anonymous voice communication using an online
data service

BSPR:
U.S. Pat. Nos. 4,847,890, 5,058,152 and 5,361,295 issued to Solomon disclose
an anonymous telephone communication system. In the Solomon system each
subscriber is assigned a personal identification number (PIN) that is stored
in a database with the telephone number of the subscriber. The subscriber
places a personal advertisement in a printed publication which lists the PIN
and a phone number of the system. A reader who wishes to contact the
subscriber calls the published phone number of the system and enters the PIN
through the telephone keypad. The system correlates the PIN with the
subscriber telephone number and connects the caller to the subscriber. In this
manner the caller does not know the phone number of the subscriber.

BSPR:
Prodigy offers a service which allows subscribers to search ads online.
However, to contact the advertiser, the subscriber must follow the same
procedure used for a newspaper ad ie. dial the system and enter the PIN from
the ad. This system is limited to chat mates who place ads and the set up
process for the voice call is not integrated with the online data service.

DEPR:
The On-line data system 18 is a computing device with storage and
communications capability which provides services such as electronic mail,
chat, newsgroups, and access to information. Examples of the firms which
provides these services are AMERICA ONLINE and PRODIGY. The Internet can also
provide these services using a distributed architecture for the computing
device.

DEPR:
Selecting Private Chat 88 on pull down menu 74 will bring up dialog box 92
which requests the name 94 of the other user, a message 96 to be sent to that
user, and a button 98 causes the message to be sent to the other user. When
the other user accepts the private chat, the On-line data system 18 sends a
message to the personal computer which results in the display of the window
100. This window 100 displays the messages 102 sent between the two users,
provides for the sending of messages to the other user 104, 106 and includes
an icon 108 for initiating an anonymous voice call.

DEPR:
The graphical interface features shown in FIG. 4 exist in present on-line
services except for the Anonymous Voice command 76 which may be located in the
menu bar 70 or a pull down menu 72, and the Anonymous Voice icons 86 and 108
located in public and private chat windows.

DEPR:
When a person calls the system, automatic number identification (ANI) is used
to obtain the callers telephone number. The system can identify the couple

record to be used by using the matchcode entered and the ANI.

DEPR:
The message id 114, identifies the type of the message connect 110 or
disconnect 112. The first caller info 116 and second caller info 118 describe
each party. Caller info 122 contains the fields which describe each party. The
message can contain an optional matchcode 120 which is not used to set up the
"online" initiated call but can be used to set up subsequent calls using the
"standalone" or "single party initiation" method.

DEPR:
Caller information 122 provides detail on the fields used to describe each
caller. A caller identifier 124 is used to identify a party requesting an
anonymous voice call. In the preferred embodiment, this identifier would be
the telephone number of the party. Alternatively, the identifier could be a
subscriber id which identifies the party as a subscriber to the anonymous
voice service. In this case, the Anonymous Voice System 14 would maintain a
file which provided the telephone number associated with each subscriber id.
The Dial in/Dial out field 126, indicates whether the Anonymous Voice System
14 should dial the party or the party will dial the system. The ODS ID field
128 identifies the On-line data system 18 which is initiating the request.

DEPR:
The disconnect message 112 is sent from the Anonymous Voice System 14 to the
On-line data system 18 when the anonymous voice call is complete; or when the
Anonymous Voice System 14 is unable to set up the call. The message id 114
identifies the message as a disconnect message. The message status field 132
indicates whether or not the call was successfully completed. First party
completion information and second party completion information 134, 136
describe call completion information for each party.

DEPR:
Completion info 138 provides detail on the information transmitted when a call
is completed. The start and end time of the call, 140, 142 is included for
billing the parties by the on-line data system 18 or to allow the on-line data
system 18 to calculate commissions owing for initiating the call. The caller
identifier 144 identifies the party making the call; this field corresponds to
124 in the caller info 122. The ODS ID field 146 identifies the On-line data
system 18 which initiated the call, this field corresponds to 128 in the
caller info 122.

DEPR:
In processing block 202 the switch 52 is instructed to connect the incoming
AVS channel to an available voice processing channel on the voice processing
board 50. The voice processing board 50 signals the circuit switched network
12 that it is ready to accept the Automatic Number Identification (ANI), i.e.,
the telephone number of the calling party and Dialed Number Identification
Service (DNIS), i.e. the called telephone number. The circuit switched network
12 sends the ANI and DNIS to the voice processing board 50. The voice
processing board 50 uses DTMF or MF tone detection to receive the ANI and DNIS
from the network 12. The voice processing board 50 signals that it is ready to
answer the call and the circuit switched network 12 connects the calling party
to the voice processing board 50 over access line 48.

DEPR:
The Anonymous Voice System 14 may connect the wrong parties in the unlikely
situation where two couples have selected the same matchcode and time for
their first call. This problem could be avoided by assigning a unique
identifier to every user of the Anonymous Voice System 14. When two parties
want to initiate an anonymous voice call, they would reveal their identifier
to the other party and both parties would use their identifier and the other
party's identifier as the matchcode. Since this matchcode would be unique for
every couple, there is no chance of connecting the wrong parties. However,
this approach has the disadvantage of requiring the assignment of unique user
ids to every user, and it is not possible to completely break off contact
since the other party will still know the unique identifier assigned to the
party wishing to break off contact.

DEPR:

Two parties can also initiate an anonymous voice call using an On-line data
system 18. Both parties would use personal computers 24, 26 to log onto the
On-line data system 18. The two parties may contact each other using public
chat, private chat, electronic mail, or newsgroups through the ODS 18. The
parties can communicate via the On-line data system 18 without revealing their
identity to each other because users are commonly identified on these systems
by screen names, handles, or subscriber ids which only the operator of the
On-line data system 18 can translate into the subscriber's identity.

DEPR:
Either party can initiate an anonymous voice connection. If they are using a
text based service such as a bulletin board system, the first party sends a
text string to the On-line data system 18 which invokes a global command. A
global command is a command which can be executed at any point in the online
session; it is not necessary to be at a menu which contains the command.
Referring to FIG. 4, if the parties are using an On-line data system 18 which
supports a graphical user interface, then the parties may select a menu
command such as Anonymous Voice command 76 or click on an icon such as 86 or
108 which are accessible while in public or private chat.

DEPR:
Referring to FIG. 7d, when the Anonymous Voice System 14 receives a connect
message 110 in block 250, the system would begin processing at block 270. The
process would search for a couple record 80 that contains telephone numbers 86
which match the telephone numbers 124 of the parties provided in the connect
message 110 by the ODS 18. If a matching couple record is not found, this step
would set up a couple record 80 using the information from the connect message
110. The first call switch 88 is set to 1 (first call), the online status
switch 90 is set to 2 (online), the date of last activity 92 is set to today's
date, and the first 84a and second 84b party information is entered. The
telephone number 86 is set to the caller identifier 124, the status 94 is set
to 0 (inactive), the accept calls field 96 is set to 1 (accept calls), the
first message field 98 is set to 0 (no messages), the AVS channel 100 is set
to 0, the ODS id 128 is set to the OSD id 128 from the connect message, and
the dial in/dial out field 126 is set to dial in/dial out 126 from the connect
message. If a matching couple record 80 is found, then only the online status
90, date of last activity 92, AVS channel 100, ODS id 128, and Dial in/dial
out 126 fields are updated.

DEPR:
It would also be possible to asynchronously schedule an anonymous voice call.
The first party would enter their information associated with the anonymous
voice call, a proposed time for the call, and the user id of the second party.
When the second party logged on, the On-line data system 18 would ask whether
the party wanted to accept the anonymous call at the suggested time from the
requesting party. If the party accepts, the party's information is entered and
the On-line data system 18 sends the connect message 110 to the Anonymous
Voice System 14 at the specified time.

DEPR:
The Anonymous Voice System Controller 32 stores the couple records 80 for
Anonymous Voice Systems 14A and 14B. An AVS Id field 722 identifies the AVS 14
that will process the anonymous call for each party. To read from or write to
the couple record 80, an Anonymous Voice System 14 sends a message to the
Anonymous Voice System Controller 320 which responds to the request by
updating the couple record in its database or by retrieving the requested
couple record from its database. The Anonymous Voice System Controller 320 may
ensure that the two Anonymous Voice System 14 are operating in sync by
forwarding updates of the couple records 80 to the AVS systems 14. A connect
step such as 216 in FIG. 7A may require the first AVS 14A to dial the second
AVS 14B using the distributed telephone number of the Anonymous Voice System
14B. In this manner AVS 14B uses the DNIS in step 204 to distinguish customer
calls from distributed AVS calls. The first AVS 14A would also send a message
to the second AVS 14B identifying the couple for which the dial in call was
intended. The disconnect procedure of block 220 would include hanging up the
call 903 between AVS 14A and 14B.

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. Desc | Image |

☐   2.   Document ID: US 5796393 A   Relevance Rank: 54

L4: Entry 8 of 11   File: USPT   Aug 18, 1998

DOCUMENT-IDENTIFIER: US 5796393 A
TITLE: System for intergrating an on-line service community with a foreign service

BSPR:
To interact with the CompuServe Information Service, a subscriber's computer may be equipped with communication or connection software that has a graphical user interface such as the CompuServe Information Manager for Windows.RTM. (WinCIM). The communication software allows the subscriber to establish and maintain a connection with the information service and to perform tasks and retrieve information content from the service as well as interact with other subscribers. Typically, the communication software is designed to support all of the features and functionality of the information service and is tailored to a user's interaction with the on-line service. Content at the on-line service is typically organized or categorized according to areas of interest among groups of users (e.g., Windows Users' Forum, CNN Online, Entrepreneur's Small Business Forum). Content is generally presented or displayed in a similar manner regardless of the area of interest. Users are able to locate content easily and communicate easily with others who share similar interests (e.g., via forums, email, conferencing or chat) thereby creating communities.

DEPR:
Each community supported by the present invention may provide "capabilities." The actions that may be performed within a community are the communities capabilities. Capabilities represent a variety of interaction methods or options. Primary or core capabilities may include a "Community Centre" (or Home Page which introduces the user to the community), "Create or View Comments" (e.g., annotations such as threaded messages, documents, spreadsheets, etc. for a particular community), "Who's Online" (a list of members currently in the community), "Chat" (real time interactions with other community members), "Invitations" (messages from one community member to another to chat, play a game, etc.), "Help" (instructions on how to perform a particular task, for example), "Notices and Personal Messages" (e.g., email), "Internet Features" (e.g., CUCMB, Internet Phone), "Games" (e.g., DOOM, Quake, Flight Simulator). Special capabilities may also be developed for a community.

DEPR:
In a preferred embodiment of the present invention, a session between a Community Server and a Community Client is managed by primarily two objects--a Session object and a Community object. The Session object controls communications sessions with the Community Server. It maintains a list of communities to which the users belongs so that access to communities may be provided as the user navigates the Web. In the event the user requests access to community content or community interactions, the Session object establishes a Community object that manages interactions with a specific Community server. The Community server, in turn, is responsible for managing interactions with the community associated with the Web page. Preferably, each community is identified by a text name and an identification number and has an associated port number through which a connection may be established to a Community server. Preferably, each interaction between a Community Client and a Community Server is identified by a "Capability Id" number. These numbers represent specific features, functions, or community capabilities that may be offered to the user. Primary or core capabilities may include a "Community Centre" (or Home Page which introduces the user to the community), "Create or View Comments" (e.g., annotations for a particular community), "Who's Online"

(a list of members currently in the community), "Chat" (real time interactions with other community members) and "Invitations" (messages from one community member to another to chat, play a game, etc.). Special capabilities may also be developed for a community.

DEPR:
Each capability may be comprised of one or more functions. For example, a "comments capability" that provides the ability to annotate or attach comments to a Web site may support functions such as notification (change attribute of screen to notify user comments for the current Web page are available), messaging (view list of topics associated with a Web page, view list of topics created in a community, read messages within a topic, reply to a message, etc.), and chat (view list of associated public chat rooms, enter into private and public chat sessions). A membership capability may include functions that support listing (list of members currently participating in a community), profile (access member profile data), modify (personal profile data), and search (community membership), etc.

DEPR:
Preferably, transactions carry the following data (type): user_Id (string), community Id (number), server Id (number), transaction type, also called request code (number), and version (number). Because transactions are serialized objects, the transaction may include the name of the type of the transaction and a schema version number. The bytes of the serialized object are preceded by 8 bytes: 4 (representing a 32 bit number, in network byte order) that identify the version of the packet, and 4 (also representing a 32 bit number, in network byte order) that specify the number of bytes that follow.

DEPR:
Every transaction may be recorded in the tracking table of the tracking database using the base information (e.g., user id, community id, server id, and request code), and the corresponding URL, if available. For example, CLoginTrack and CLogoutTrack transactions may cause the addition or removal of user id information from a "Who is Here" list which is kept in memory. Finally, the CInviteTrackReq transaction queries the "Who is Here" list while the CWhoIsHereTrackReq transaction returns the entire list.

DEPR:
In a preferred embodiment in which voting is supported, the CVoteURLTrack transaction may cause the community id, the item string, and the score to be inserted into or updated in the vote table and the vote count to be incremented. The value of the score is added to the score (initially zero) for the particular community id and issue combination.

DEPR:
In a preferred embodiment of the present invention, the toolbar is extensible and dynamic so that a user may modify or tailor it to meet his or her needs or preferences. Users may extend the capabilities of the toolbar by creating new capabilities based on the primary or core capabilities provided by the present invention. As described earlier, the primary or core set of capabilities may include a Community Centre, Create or View comments, Who's Online, Chat, or Invitations. Other communities may have special capabilities in addition to the core capabilities. Using a scripting language, a user may extend the toolbar by creating a new option comprised of primary or core capabilities. For example, a user may create a "Game" capability comprised of the "Who's Online" capability and "Invitation" capability. When invoked from the toolbar, the Game capability may provide the user with a list of community users currently on-line and then invoke a game based on a another community member's acceptance of an invitation to play a game.

DETL:

Field # Name Bytes DESCRIPTION
Version ID 4 Version identifier of the packet Packet 4 Length of Login Packet in bytes Length Login varies Serialized MFC Cobject derived class Packet containing: DWORD Request Type Code DWORD Transaction Version Id CString RPA Authorization Cheating Header

DETL:

_____ Field # Name Bytes DESCRIPTION
_____ Version ID 4 Version identifier of the
packet Packet 4 Length of Login Packet in bytes Length Login varies Serialized
MFC Cobject derived class Response containing: Packet DWORD Response type Code
DWORD Version ID CString RPA security context CString RPA session key CString
RPA response CString User Name CString User Name Realm DWORD Base Community ID
CobArray Array of N member info objects Member Info Object structure DWORD
Community ID CString CommunityName CString Community Homepage URL Cstring User
Alias (screen name) DWORD Flags _____

DETL:

_____ Field # Name Bytes DESCRIPTION
_____ Version ID 4 Version identifier of the
packet Packet 4 Length of Request Packet in bytes Length Request varies
Serialized MFC Cobject derived class containing: Packet DWORD Request Type
Code DWORD Transaction Version ID CString RPA Authorization Cheating Header
_____

DETL:

_____ Direction Request C- Client Type Code
S- Server Contents _____ Error 0 C S DWORD
Error Code.Win32 or WINSOCK error code CString Descriptive error message Login
1 C S N/A See Login protocol Logout 2 S C N/A Client informs server that user
is logging off. Get URL 3 C S CString URL Info CDWordArray Array of community
IDs the client is querying the server about for this URL Invite 4 C S CString
User Name of member or- initiating the S C invitation CString Invitation type
DWORD IP Address of server handling the invitation (a chat server, for
example). Unused when sent from client to server. DWORD Port of server
handling the invitation, Unused when sent from client to server. CString
Channel Unused when sent from client to server. DWORD Context. Opaque item to
be sent back to Community server in the client response to this request.
Invite 5 C S CString User Name of member Reply initiating the invitation
CString Invitation type DWORD Context. Opaque item obtained from the
invitation request received from the server. Create New 6 C S CString URL to
associate with Message new threaded message. DWORD Community ID to associate
with threaded message. Membership 7 C S DWORD Unused. If the server Search
receives this requests, it performs a "Who is Here" search. (i.e., it returns
a list of all users currently logged into the community.) Vote 8 C S CString
URL being voted for. Timeout 9 S C Server is informing the client that the
session has timed out. _____

DETL:

_____ Field Name # Bytes DESCRIPTION
_____ Version ID 4 Version identifier of the
packet Packet 4 Length of Packet in bytes Length Response varies Serialized
MFC Cobject derived class containing: Packet DWORD Response type Code DWORD
Version ID _____

DETL:

_____ Response Type Code Contents
_____ Error 0 DWORD Error Code. Win32 or
WINSOCK error code CString Descriptive error message. OK 1 N/A Generic
"success" response Login 2 N/A See login protocol. Get URL 3 CString URL Info
CObArray Array (0 or more) of the following: DWORD Community ID CString URL to
get to threaded message for this URL DWORD Flags Invite 4 CString User Name of
member invited CString Invitation type BOOL In non-zero, the user accepted the
invitation. DWORD IP Address of server handling the invitation (a chat server,
for example). DWORD Port of server handling the invitation CString Channel
(may be blank) Create New 5 CString URL to follow to create new Message
threaded message. Membership 6 CStringArray Array of user names of all Search
users matching search criteria. _____

DETL:

_____ Field Name # Bytes DESCRIPTION
_____ Version ID 4 Version identifier of the
packet Packet 4 Length of Request Packet in bytes Length Request varies
Serialized MFC CObject derived class containing: Packet DWORD Request Type
Code DWORD Transaction Version ID CString User Name of member initiating the

invitation CString Invitation type DWORD IP Address of server handling the
invitation (a chat, server for example). DWORD Port of server handling the
invitation CString Channel (may be blank) DWORD Context. Opaque item to be
sent back to the Community server in the client response to this request.

DETL:

_____ Transaction Type Transaction Specific
Data _____ CSetupTrack persistance flag
(Boolean) CLoginTrack URL (Cstring) CLogoutTrack none CCreateMsgThreadTrack
URL (Cstring) CGetAnnotationTrack URL (Cstring) CWhoIsHereTrackReq none
CWhoIsHereTrackRsp list of upper Ids (number) (CString) (CString) (CString) .
. . CURLInfoTrack URL (Cstring) CInviteTrackReq user Id of invitee (CString),
type of interaction: chat, game, etc. (CString), IP address of server hosting
inviting user (number) and port of server hosting inviting user (number)
CInviteTrackRsp acceptance flag (Boolean), reason code (number), IP address of
server hosting invitee (number) and port of server hosting invitee (number)
CVoteURLTrack name of item or URL (CString), score (number)

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| Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image |
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☐ 3. Document ID: US 6020884 A   Relevance Rank: 54

L4: Entry 2 of 11   File: USPT   Feb 1, 2000

DOCUMENT-IDENTIFIER: US 6020884 A
TITLE: System integrating an on-line service community with a foreign service

BSPR:
To interact with the CompuServe Information Service, a subscriber's computer
may be equipped with communication or connection software that has a graphical
user interface such as the CompuServe Information Manager for Windows.RTM.
(WinCIM). The communication software allows the subscriber to establish and
maintain a connection with the information service and to perform tasks and
retrieve information content from the service as well as interact with other
subscribers. Typically, the communication software is designed to support all
of the features and functionality of the information service and is tailored
to a user's interaction with the on-line service. Content at the on-line
service is typically organized or categorized according to areas of interest
among groups of users (e.g., Windows Users' Forum, CNN Online, Entrepreneur's
Small Business Forum). Content is generally presented or displayed in a
similar manner regardless of the area of interest. Users are able to locate
content easily and communicate easily with others who share similar interests
(e.g., via forums, e-mail, conferencing or chat) thereby creating communities.

DEPR:
Each community supported by the present invention may provide "capabilities."
The actions that may be performed within a community are the communities
capabilities. Capabilities represent a variety of interaction methods or
options. Primary or core capabilities may include a "Community Centre" (or
Home Page which introduces the user to the community), "Create or View
Comments" (e.g., annotations such as threaded messages, documents,
spreadsheets, etc. for a particular community), "Who's Online" (a list of
members currently in the community), "Chat" (real time interactions with other
community members), "Invitations" (messages from one community member to
another to chat, play a game, etc.), "Help" (instructions on how to perform a
particular task, for example), "Notices and Personal Messages" (e.g., email),
"Internet Features" (e.g., CUCME, Internet Phone), "Games" (e.g., DOOM, Quake,
Flight Simulator). Special capabilities may also be developed for a community.

DEPR:
In a preferred embodiment of the present invention, a session between a
Community Server and a Community Client is managed by primarily two objects--a
Session object and a Community object. The Session object controls
communications sessions with the Community Server. It maintains a list of
communities to which the users belongs so that access to communities may be
provided as the user navigates the Web. In the event the user requests access
to community content or community interactions, the Session object establishes
a Community object that manages interactions with a specific Community server.
The Community server, in turn, is responsible for managing interactions with
the community associated with the Web page. Preferably, each community is
identified by a text name and an identification number and has an associated
port number through which a connection may be established to a Community
server. Preferably, each interaction between a Community Client and a
Community Server is identified by a "Capability Id" number. These numbers
represent specific features, functions, or community capabilities that may be
offered to the user. Primary or core capabilities may include a "Community
Centre" (or Home Page which introduces the user to the community), "Create or
View Comments" (e.g., annotations for a particular community), "Who's Online"
(a list of members currently in the community), "Chat" (real time interactions
with other community members) and "Invitations" (messages from one community
member to another to chat, play a game, etc.). Special capabilities may also
be developed for a community.

DEPR:
Each capability may be comprised of one or more functions. For example, a
"comments capability" that provides the ability to annotate or attach comments
to a Web site may support functions such as notification (change attribute of
screen to notify user comments for the current Web page are available),
messaging (view list of topics associated with a Web page, view list of topics
created in a community, read messages within a topic, reply to a message,
etc.), and chat (view list of associated public chat rooms, enter into private
and public chat sessions). A membership capability may include functions that
support listing (list of members currently participating in a community),
profile (access member profile data), modify (personal profile data), and
search (community membership), etc.

DEPR:
Preferably, transactions carry the following data (type): user Id (string),
community Id (number), server Id (number), transaction type, also called
request code (number), and version (number). Because transactions are
serialized objects, the transaction may include the name of the type of the
transaction and a schema version number. The bytes of the serialized object
are preceded by 8 bytes: 4 (representing a 32 bit number, in network byte
order) that identify the version of the packet, and 4 (also representing a 32
bit number, in network byte order) that specify the number of bytes that
follow.

DEPR:
Every transaction may be recorded in the tracking table of the tracking
database using the base information (e.g., user id, community id, server id,
and request code), and the corresponding URL, if available. For example,
CLoginTrack and CLogoutTrack transactions may cause the addition or removal of
user id information from a "Who is Here" list which is kept in memory.
Finally, the CInviteTrackReq transaction queries the "Who is Here" list while
the CWhoIsHereTrackReq transaction returns the entire list.

DEPR:
In a preferred embodiment in which voting is supported, the CVoteURLTrack
transaction may cause the community id, the item string, and the score to be
inserted into or updated in the vote table and the vote count to be
incremented. The value of the score is added to the score (initially zero) for
the particular community id and issue combination.

DEPR:
In a preferred embodiment of the present invention, the toolbar is extensible
and dynamic so that a user may modify or tailor it to meet his or her needs or

preferences. Users may extend the capabilities of the toolbar by creating new capabilities based on the primary or core capabilities provided by the present invention. As described earlier, the primary or core set of capabilities may include a Community Centre, Create or View comments, Who's Online, Chat, or Invitations. Other communities may have special capabilities in addition to the core capabilities. Using a scripting language, a user may extend the toolbar by creating a new option comprised of primary or core capabilities. For example, a user may create a "Game" capability comprised of the "Who's Online" capability and "Invitation" capability. When invoked from the toolbar, the Game capability may provide the user with a list of community users currently on-line and then invoke a game based on a another community member's acceptance of an invitation to play a game.

DETL:
_____ The client sends a Login Packet of the following format: Field # Name Bytes DESCRIPTION
_____ Version ID 4 Version identifier of the packet Packet 4 Length of Login Packet in bytes Length Login varies Serialized MFC Cobject derived class Packet containing: DWORD Request Type Code DWORD Transaction Version Id CString RPA Authorization Cheating Header
_____ Login Response (Server to Client) If authenticated, the server responds with a Login Response packet Field # Name Bytes DESCRIPTION _____ Version ID 4 Version identifier of the packet Packet 4 Length of Login Packet in bytes Length Login varies Serialized MFC Cobject derived class Response containing: Packet DWORD Response type Code DWORD Version ID CString RPA security context CString RPA session key CString RPA response CString User Name CString User Name Realm DWORD Base Community ID CobArray Array of N member info objects Member Info Object structure DWORD Community ID CString Community Name CString Community Homepage URL Cstring User Alias (screen name) DWORD Flags

_____

DETL: .

_____
The format of a request transaction may be as follows: Field # Name Bytes DESCRIPTION

_____
Version ID 4 Version identifier of the packet Packet 4 Length of Request Packet in bytes Length Request varies Serialized MFC Cobject derived class containing: Packet DWORD Request Type Code DWORD Transaction Version Id CString RPA Authorization Cheating Header
_____ The following table contains descriptions of the various request types. Direction C- Client Request Type Code S- Server Contents

_____
Error 0 C .fwdarw. S DWORD Error Code.Win32 or WINSOCK error code CString Descriptive error message Login 1 C .fwdarw. S N/A See Login protocol Logout 2 S .fwdarw.C N/A Client informs server that user is logging off. Get URL 3 C .fwdarw. S CString URL Info CDWordArray Array of community IDs the client is querying the server about for this URL Invite 4 C .fwdarw. S CString User Name of member or- initiating the S .fwdarw. C invitation CString Invitation type DWORD IP Address of server handling the invitation (a chat server, for example) Unused when sent from client to server. DWORD Port of server handling the invitation, Unused when sent from client to server. CString Channel Unused when sent from client to server. DWORD Context. Opaque item to be sent back to Community server in the client response to this request. Invite 5 C .fwdarw. S CString User Name of member Reply initiating the invitation CString Invitation type DWORD Context. Opaque item obtained from the invitation request received from the server. Create 6 C .fwdarw. S CString URL to associate with New new threaded message. Message DWORD Community ID to associate with threaded message. Membershi 7 C .fwdarw. S DWORD Unused. If the server p receives this requests, it performs a Search "Who is Here" search. (i.e., it returns a list of all users currently logged into the community.) Vote 8 C .fwdarw. S CString URL being voted for. Timeout 9 S .fwdarw. C Server is informing the client that the session has timed out.

_____

DETL:
_____ Field Name # Bytes DESCRIPTION

_____ Version ID 4 Version identifier of the
packet Packet 4 Length of Packet in bytes Length Response varies Serialized
MFC Cobject derived class containing: Packet DWORD Response type Code DWORD
Version ID _____

DETL:

_____ _____

Response Type Code Contents

_____
Error 0 DWORD Error Code. Win32 or WINSOCK error code CString Descriptive
error message. OK 1 N/A Generic "success" response Login 2 N/A See login
protocol. Get URL Info 3 CString URL CObArray Array (0 or more) of the
following: DWORD Community ID CString URL to get to threaded message for this
URL DWORD Flags Invite 4 CString User Name of member invited CString
Invitation type BOOL If non-zero, the user accepted the invitation. DWORD IP
Address of server handling the invitation (a chat server, for example) DWORD
Port of server handling the invitation Cstring Channel (may be blank) Create
New 5 CString URL to follow to create new Message threaded message. Membership
6 CStringArray Array of user names of all Search users matching search
criteria.

_____

DETL:
                                          Field Name # Bytes DESCRIPTION
_____   Version ID 4 Version identifier of the
                                      ____
packet Packet 4 Length of Request Packet in bytes Length Request varies
Serialized MFC CObject derived class containing: Packet DWORD Request Type
Code DWORD Transaction Version Id Cstring User Name of member initiating the
invitation CString Invitation type DWORD IP Address of server handling the
invitation (a chat, server for example) DWORD Port of server handling the
invitation CString Channel (may be blank) DWORD Context. Opaque item to be
sent back to the Community server in the client response to this request,

_____

DETL:

_____ _____

Transaction Type Transaction Specific Data

_____
CSetupTrack persistence flag (Boolean) CLoginTrack URL (Cstring) CLogoutTrack
none CCreateMsgThreadTrack URL (Cstring) CGetAnnotationTrack URL (Cstring)
CWhoIsHereTrackReq none CWhoIsHereTrackRsp list of user Ids (number) (CString)
(CString) (CString) . . . CURLInfoTrack URL (Cstring) CInviteTrackReq user Id
of invitee (Cstring), type of interaction: chat, game, etc. (CString), IP
address of server hosting inviting user (number) and port of server hosting
inviting user (number) CInviteTrackRsp acceptance flag (Boolean), reason code
(number), IP address of server hosting invitee (number) and port of server
hosting invitee (number) CVoteURLTrack name of item or URL (Cstring), score
(number)

_____

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image |

_____

☐ 4.   Document ID: US 5974446 A   Relevance Rank: 53

L4: Entry 4 of 11   File: USPT   Oct 26, 1999

DOCUMENT-IDENTIFIER: US 5974446 A
TITLE: Internet based distance learning system for communicating between
server and clients wherein clients communicate with each other or with teacher
using different communication techniques via common user interface

ABPL:
A novel user-friendly method of and system for integrating the use of a
plurality of different communication techniques for over-the-Internet
interfacing between a central server storing a plurality of different
information topics and user identification information and a plurality of
independent user computer stations which have selected common information
topics and are widely geographically separated, for such purposes as
information and dialog networking of schools and other groups with common
topic interests, and enabling real-time intercommunication amongst such users
and with the server, and including growing the information on the selected
topics through Internet feedback to the server of user dialog and supplemental
information relating thereto; the method creating a virtual common room
atmosphere for all the users (such as the same virtual classroom) wherein,
irrespective of the diverse geographical locations and actual distances of the
varied user stations from one another and from the central server, real-time
interactions are enabled amongst all simulating as if the users were all
actually in the same room at the same time and participating together.

BSPR:
Numerous systems have evolved and are rapidly continuing to evolve for using
the Internet as a fountain of information and contacts to impart information
of all kinds to computer users, leaving it, however, up to the individual
users and their individual resourcefulness or talents to ferret out the
sources of desired information, finding cross-referencing sources, discovering
appropriate world-wide web pages, and discovering e-mail and databases and
directories and other addresses and identifications. While amazing and
exciting in its scope, this process is far from organized, is most
time-consuming, with much trial and error and hit or miss, and is largely
unintegrated and somewhat user-unfriendly and often discouraging.

BSPR:
Attempts have recently been started at least to simplify topic information and
source identification with so-called "object" or icon ("button") selection as
with code concepts such as Java (Web Page URL reference
http://java.sun.com/doc/index.html). Individual companies have also come up
with solutions that link selected communication media together (such as e-mail
software and web-page software) in the form of a suite of applications, but
still without enabling universal linking of all of the available services
through a new interpretation of the universal functionality of such services
and their interrelationships as provided by the present invention. For
example, in connection with Volatac Iphone (http://www.pulver.com/vocaltec/),
service is broken down by topics with limited voice and chat communication and
enabling exchange of files over the Internet the topics being used primarily
to enable temporal location of similar-interest parties but not for putting
resources in a growing framework and adding to topic information resources.

BSPR:
There is also provided a list down the side of the group window which contains
the name of each member of the group currently online. The list will be sorted
such that professors and TA's are at the top, followed by the people the user
knows. By clicking on a user's name one can send either an email message or a
real-time zephyr message to that user. Email messages are useful for sending
long or complex messages that may incorporate graphics, sound, or files from
other software packages. These messages can be sent to individual users either
online or off-line, entire groups, or even to people on the Internet that are
not part of the system. When a new message arrives, a little note appears on
the specified group's button in the main toolbar. Personal mail appears within
a user's own private group. Within each group window there is a button which
brings up a list of email messages sent to it. Selecting a message will
display its contents. Zephyrs are much simpler than e-mail since they only
handle text. Like email messages, however, they can be sent to users or entire
groups. But, zephyrs immediately appear in a separate window on the designated
user's screen and only function if the selected user is on-line. Zephyrs are
preferable to email for quick, real-time messages, and also preferable to chat
since it does not require viewing a specific window in order to communicate.
It is possible to block receiving zephyrs from a particular user or zephyrs
sent to an entire group.

BSPR:

The present invention, thus, has as a primary object, the provision of a new and improved method of and system for integrating the use of the plurality of different Internet-useable communication techniques for communicating, over the Internet, pluralities of different and varied information topics to a plurality of widely geographically distant and/or separated independent user (client) computer stations from one or more central file servers storing server information topics and interested user identification information, not only to enable common access to selected information topics, but to network and allow ready intercommunication also amongst the computer user stations, including growing the topic information database at the server by contribution from the users.

BSPR:
A further object is to provide such a novel technique and system that organize access by each computer station user, with common screen "buttons" and preferably "object" icons, not only to the central server(s), but to readily identify similar interest users and without the necessity for resort to searching different sources, databases or directories, either for topic information or for identification and addresses of other interested users--and all on a single common type screen display.

BSPL:
What also makes the system of the invention special is the way in which these features are integrated. The key to the novel software is the concept of a group. A group is collections of people with common interests. When a user logs into the system, he or she will see a toolbar containing a button for each group they belong to. All users are members of their own private "group" which contains a list of the people they know on the system. Classes, fields of interest and hobbies are also represented as groups. Clicking on any one of the group buttons will bring up a new window. This contains all of the actions that can be performed with the group. Each group has an information page which acts as the reference point for the group's archived resources such as presentations, discussions, frequently asked questions (FAQ's) and software.

BSPL:
Groups that represent classes will have additional features such as online test and homework assignments, multimedia lectures and lecture notes. The lectures, homework assignments and tests may be viewed at a student's convenience. Since the students will have many questions about the assignments or lectures, teachers and teaching assistants will hold scheduled online discussion sessions. This will be done through another section of the group's window called the "chat" area. This is a real-time text-based conferencing system. Users type one or two sentences at a time and then send them out to the group. In the chat area their text will show up next to the user name. A session might look like the following:

BSPL:
storing also at such central file server(s) the files and other detailed information pertaining to each informational topic indexed in the database; providing each user computer station with similar software that generates a common type screen at each station containing selectable "buttons" for personal user identification and for each different information topic selected as of interest to the user; enabling said software, upon a user selecting a topic "button", for thereupon generating a screen pattern of common format for each topic containing four primary selections:

BSPL:
the software further providing on said screen pattern, a web-browsing window tuned to a topic-specific web page; and wherein, as the user logs in, the user's personal identification and information is identified in the central server file database and the user screen topic "buttons" are customized by the server to those topics of interest selected by the user and stored in said database; and, upon the user selecting a topic "button" and there--upon generating said screen pattern, searching for all stored data on that topic; and, upon the user selecting a desired communication function mode from the "tool" box section, communicating such data from the server in the appropriate user-selected communication mode over the Internet to the user screen.

BSPV:

(2) a personal information and <u>identification</u> directory on all the users of
the plurality of user computer stations including their specific selected
informational topics of interest;

DEPR:
Referring to FIG. 1, the exemplary illustration of the invention as applied to
educational systems is shown depicted as comprising one (or more, if desired)
central file server 1 having a data base D storing an index of a plurality of
different information topics T (such as different educational subjects for
schools, or for other groups as well, various common interest subjects,
topics, lectures or presentations) and a personal user information and
<u>identification</u> directory U (including, for example, e-mail and other
addresses), and the specific user-selected information topics of interest to
the user, together with stored files and other detailed information pertaining
to each such informational topic indexed in the server database D, and
suitable software S, later discussed, for retrieving data on user
computer-station log-in and topic and Internet communication type mode
selection.

DEPR:
All of this is shown connected to the Internet I for communication with
pluralities of client-user computer stations UCS.sub.1, UCS.sub.2, etc.,
widely dispersed or located geographically, regionally, nationally and
world-wide. At each of the client-user computer stations UCS.sub:1, UCS.sub.2,
etc., FIG. 2, the provided software, on user log-in, generates a log-in screen
C. If a first time user, a new-user profile screen is provided for
establishing identity, user name (e-mail), pass word, location, and selected
informational topics of interest, as well as other personal information and
<u>identification,</u> as later more fully described in connection with FIG. 3A. This
information is transmitted back over the Internet I to the central server 1,
and, upon <u>identification</u> of validity, the user is granted access to the system
via return to the log-in screen at the user station which now displays the
user name. When the user's name and password are furnished by the user in the
log-in, the server verification system allows the software loading to
continue. The user then sees an introduction screen E which, for U.S. schools,
can contain the customary classroom opening-day pledge of allegiance to the
flag. Upon dismissal of this screen, the main interface screen F comes up
containing a menu bar and a selection of "buttons" representing the
user-selected topics of interest effected as in Java "object" code (see
http://java reference, above).

DEPR:
If, on the other hand, a class has too many people, the teacher will
eventually become overwhelmed with questions, or will constantly end up
answering similar questions. Thus, the invention provides for letting students
(or other users) help one other. There will be two other buttons; "offering
tutoring" OT and "request tutoring" RT and a window with a list that contains
the student's (user's) name and a brief subject for the question. This way,
when a student has a question that may have been answered before, they can
first place their question in the "tutoring" queue. The term "tutoring" is
intended generically to embrace explanation or learning or information
assistance or supplementing. When a student (or other user) selects "request
tutoring", a subject for the question is entered by the student typing on his
or her own, or choosing from a list supplied by the teacher. Once a student
has done this, every student will see a new request in the list for tutoring.
If a student wants to answer another student's question, he or she simply
clicks on the student's name from the list and then clicks on "offer tutoring"
OT. This creates a new window with a <u>private</u> chat session between two students
(users), not only providing learning assistance, but giving students (or other
users) a chance to meet one another and to learn how to assist one another.

DEPR:
While reference has herein been made to "Internet", it appears that the volume
of information may ultimately be handled by connecting groups of computers
networking (wide area network--WAN) or <u>private</u> wide area networks or local
area networks (LAN), themselves interconnected to the Internet--networking
clusters to reduce traffic and increase speed.

CLPR:

2. A method as claimed in claim 1 and in which the server provides object form representations for the stored information on each topic and, also, therein, <u>identification</u> of the users who have specified interest in such topic, and, in response to software control, the server dynamically tracks information on what other users of common topic interest are doing at the time of a user log-in and topic selection, supplying the user from the server database with object representation for each topic and each topic-interested user, thereby facilitating user cross-referencing.

CLPR:
20. A system as claimed in claim 19 and in which the server is programmed with object form code representations for the stored information on each topic and, also, therein, with <u>identification</u> of the users who have specified interest in such topic, and, in <u>response</u> to server software, the server is provided with means for dynamically tracking information on what other users of common topic interest are doing at the time of a user log-in and topic selection, and means is provided for supplying the user from the server database with object representation for each topic and information on each topic-interested user, thereby facilitating user cross-referencing.

CLPL:
storing also at such central file server(s) the files and other detailed information pertaining to each informational topic indexed in the database, providing each user computer station with similar software that generates a common type screen at each station containing selectable buttons for personal user <u>identification</u> and for each different information topic selected as of interest to the user; enabling said software, upon a user selecting a topic button, for thereupon generating a screen pattern of common format for each topic containing four primary selections:

CLPL:
the software further providing on said screen pattern a web-browsing window tuned to a topic-specific web page; and wherein, as the user logs in, the user's personal <u>identification</u> and information is identified in the central server file database and the server customizes the user screen topic buttons to those user-selected topics of interest stored in said database; and, upon the user selecting a topic button and thereupon generating said screen pattern, the server searches for all stored data on that topic; and, upon the user selecting a topic button and thereupon generating said screen pattern, causing a search for all stored data on that topic; and upon the user selecting the desired communication function mode from the "tool" box section, communicating such stored data from the server in the appropriate user-selected communication mode over the Internet to the user screens, observable by all said users.

CLPL:
means for storing also at such central file server(s) the files and other detailed information pertaining to each informational topic indexed in the database; means for connecting the server to the Internet, each user computer station being connected to the Internet and having similar software that generates a common type screen at each station containing selectable buttons for personal user <u>identification</u> and for each different information topic selected as of interest to the user; means for enabling said software, upon a user selecting a topic button, for thereupon generating a screen pattern of common format for each topic containing four primary selections:

CLPL:
the software further providing on said screen pattern a web-browsing window tuned to a topic-specific web page; and wherein, as the user logs in, means is provided at the server for identifying the user's personal <u>identification</u> and information in the database and means for thereupon customizing the user screen topic buttons to present thereon those topics of selected as of interest by the user and stored in said database; and, upon the user selecting a topic button and thereupon generating said screen pattern, means for causing a search for all stored data on that topic; and upon the user selecting the desired communication function mode from the "tool" box section, means for automatically thereupon communicating such data from the server in the appropriate user-selected communication mode over the Internet to the user screens, observable by all said users.

CLPV:
(2) a personal information and <u>identification</u> directory on all the users of
the plurality of user computer stations including their specific selected
informational topics of interest;

CLPV:
(2) a personal information and <u>identification</u> directory on all the users of
the plurality of user computer stations including their specific selected
informational topics of interest;

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image

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☐   5.   Document ID: US 5903652 A   Relevance Rank: 44

L4: Entry 5 of 11   File: USPT   May 11, 1999

DOCUMENT-IDENTIFIER: US 5903652 A
TITLE: System and apparatus for monitoring secure information in a computer
network

BSPR:
In order to cost-effectively provide wide scale accessibility, commercial
transaction systems must not only operate with <u>private</u> communication networks,
but also operate with general purpose publicly accessible networks such as the
internet or publicly accessible network service providers. Because publicly
accessible networks have much larger numbers of users, they often provide
lower transmission costs than <u>private</u> communication networks. Unfortunately,
eavesdroppers and other intermediaries have regular and easy access to
electronic messages transported on publicly accessible networks.

BSPR:
As a result, publicly accessible networks are not secure. Accordingly, methods
have been developed to create electronic documents which are <u>private</u> and
secure from unauthorized use. In conventional systems, an electronic document
is usually converted into a secret form before transmission over the publicly
accessible network. The process of converting information into a secret form
is called "encryption" and a converted document is called an "encrypted"
document.

BSPR:
One technique called "public key/private key" encryption uses two different
keys. The first key is called a public key and it is used to encrypt a
document. The second key is called a <u>private</u> key and it is used to decrypt the
encrypted document. This is analogous to a door lock with two keys, anyone who
owns the public key can lock the door, but only the person who owns the
<u>private</u> key can unlock the door. In conventional systems, the public key is
<u>publicly</u> disseminated while the <u>private</u> key is kept <u>private</u>.

BSPR:
For example, assume that a computer user named Aaron wishes to receive
encrypted information. Aaron first directs his computer to create a public key
and a <u>private</u> key pair. Aaron then keeps his <u>private</u> key <u>private</u> while freely
distributing his public key to other computer users. If another computer user
named Barry wishes to send a document to Aaron, Barry directs his computer to
encrypt the document with Aaron's public key and also directs his computer to
send the encrypted document to Aaron. When Aaron's computer receives the
encrypted document, it decrypts the encrypted document with Aaron's <u>private</u>
key. Thus, while Barry and other computer users can send encrypted documents
to Aaron, only Aaron can decrypt and read the document.

BSPR:
For example, if a computer user named Carl wishes to digitally sign an electronic document, Carl first directs his computer to create a public key private key pair. Carl's computer then digitally signs the electronic document by encrypting a portion of the document with Carl's private key. Carl can then direct his computer to send the document and Carl's public key to another computer user. In this example, the other computer user is named Doug. When Doug receives the electronic document and Carl's public key, Doug can direct his computer to verify Carl's digital signature by comparing the digitally signed portion of the document with Carl's public key to see if a predefined mathematical relationship exists. If so, the digital signature is authenticated. Because only Carl can properly encrypt the digital signature with his private key, other computer users cannot fraudulently sign the document.

BSPR:
Finally, the security techniques and digital signature techniques can be combined to create secure documents which contain digital signatures. For example, assume that two computer users named Eric and Frank wish to transmit digitally-signed secure documents. In this example, both Eric and Frank create public key/private key pairs. If Frank wishes to receive secure documents he sends his public key to Eric. Eric then directs his computer to generate an electronic document and digitally signs a portion of the electronic document with Eric's private key. Next, Eric directs his computer to encrypt the digitally-signed electronic document with Frank's public key. Eric then sends the encrypted, digitally-signed document and Eric's public key to Frank.

BSPR:
When Frank's computer receives the encrypted, digitally-signed document, it decrypts digitally-signed document with Frank's private key. Because only Frank's computer can decrypt the digitally-signed document, the document is secure. Frank can then verify Eric's digital signature by directing his computer to compare the encrypted digital signature to Eric's public key to see if a predefined mathematical relationship exists. If so, the digital signature is said to be authentic.

BSPR:
The order manager also encrypts audit information which is related to the transaction. The audit information typically contains merchant identification data which identifies each merchant associated with a particular transaction packet. In addition, the audit information comprises the value of the transaction, the number of items purchased, etc. The order manager then directs the secured technology module to encrypt the audit packet into a format which is only accessible by an authorized network service provider.

BSPR:
In addition, the decryption module routes the encrypted transaction packet to the appropriate merchant computer based on the merchant identification data in the decrypted audit information. Advantageously, the decrypted audit information allows the electronic commerce service to route the encrypted transaction packet while maintaining confidentiality about the specific items and payment instructions.

DEPR:
The host data center 200 provides a variety of communications-based and information-based services to end-users. A service is any service provided in an online environment. Typical services include, for example, an electronic commerce service 104, an electronic mail service 214 and other services not shown such as a chat service, a bulletin board service, a media view service, an interactive game service and various other information services. Preferably, the services in the on-line network 106 are implemented as client-server applications, with server portions (or "server applications") running on the application servers 210, and with client portions (or "client applications") running on the consumer computers 100, the merchant computers 108, the acquirer computers 112 and the issuing bank computers 118. In the presently preferred embodiment, the client applications are implemented as Windows 95 executables and the server applications are implemented as dynamic link libraries which execute under the Microsoft Windows NT operating system.

DEPR:
The host data center 200 also includes one or more custom gateway computers 216 which link the host data center 200 to one or more external networks 218, such as the Internet, other on-line service providers, or different <u>private</u> networks. The external networks 218 can also link additional consumer computers 100, merchant computers 108, acquirer computers 112 and issuing bank computers 118 to the host data center 200. Each custom gateway computer 216 uses the communications protocol required by the external network 218 to which the custom gateway computer 216 is linked.

DEPR:
The consumer application module 300 (hereinafter referred to as the consumer application 300) executes on the consumer computer 100 and generates the user interface which appears on the consumer computer 100. In the preferred embodiment, the consumer application 300 is a Windows 95 compatible program such as an electronic catalog, electronic advertisement, a page in an excel worksheet, a display page in a network browser or other programs which allow the user of the consumer computer 100 to select desired goods and services. Once the user selects one or more desired items, the consumer application 300 sends item information, merchant <u>identification</u> information, acquirer <u>identification</u> information, and end-user <u>identification</u> information to the order manager module 302

DEPR:
The secured technology module 304 of the preferred embodiment uses one or more merchant public keys 308, one or more acquirer public keys 310 and an on-line network public key 312 to generate secure purchase order messages 102. As explained in further detail below, during the registration process, each merchant computer 108 generates its own merchant public key 308 and merchant <u>private</u> key (not shown), each acquirer computer 112 generates its own acquirer public key 310 and acquirer <u>private</u> key (not shown). The on-line network public key 312 is predefined by the on-line network 106.

DEPR:
As described in more detail below, the secured technology module 304 uses the merchant public keys 308, the acquirer public keys 310, the on-line network public key 312 to create the secure purchase order message 102. After generating a secure purchase order message 102, the order manager 302 sends the secure purchase order message 102 to the electronic mail module 306. In other embodiments, the secured technology module 304 may also use a consumer public key and a consumer <u>private</u> key to generate secure purchase order messages 102. Accordingly, in other embodiments, the consumer computer 100 can generate its own consumer public key and consumer <u>private</u> key.

DEPR:
The bindery module 402 also stores a copy of the on-line network public key 312, the on-line network <u>private</u> key 408, the merchant public keys 308, the merchant affidavits 410, the acquirer public keys 310, and the acquirer affidavits 412 in the electronic commerce database 404. In addition, the electronic commerce database 404 stores audit information 406 about each commercial transaction and backup copies of each secure purchase order message 102.

DEPR:
Referring now to FIG. 5, the modular components existing in the preferred merchant computer 108 are shown. In the preferred embodiment, the merchant computer 108 and the acquirer computer 112 are combined into a single computer which is hereinafter referred to as the merchant computer 108. The modular components include: an electronic mail module 306, a merchant module 500, an acquirer module 502, a secured technology module 304. In addition, the modules access a merchant <u>private</u> key 504 and an acquirer <u>private</u> key 506.

DEPR:
The item record 602 of the preferred embodiment contains an item identifier 610, an item description or summary 612, a stock keeping unit (sku) 614, a price 616, a quantity value 618, a merchant identifier 620, a shipment method 622 and additional item properties 624 which may be added in by different embodiments. In the preferred embodiment, the item identifier is a 16-bit value which uniquely identifies each item record 602. The summary 612 contains

a description of the item and is a variable length string. The stock keeping unit (sku) 614 contains item identification information and is a variable length string. The price 616 contains the cost of an item and specifies different currencies. The quantity value 618 is a 32-bit value which contains the number of items. As described in more detail below, the merchant identifier 620 is a 128-bit globally unique identifier which identifies each merchant registered to transact electronic commerce. In the preferred embodiment, the merchant identifier 620 is used to route secure messages to their proper destination. The shipment method 622 is a 32-bit value wherein different ship method values describe the mode of shipment such as American Express, first class United States mail, UPS, etc.

DEPR:
Preferably, the secured technology modules 304 in the consumer computers 100, the merchant computers 108, the acquirer computers 112, the issuing bank computers 118 and the on-line network 106 rely on the following public key/private key pairs: the on-line network public key 312, the on-line network private key 408, the merchant public key 308, the merchant private key 504, the acquirer public key 310, and the acquirer private key 506. The on-line network public key 312 is a 768-bit value. The on-line network private key 408 is a 768-bit value. The merchant public key 308 is a 768-bit value. The merchant private key 504 is a 768-bit value. The acquirer public key 310 is a 1024-bit value. The acquirer private key 506 is a 1024-bit value.

DEPR:
The goods and service order 710 contains a RC4 encryption key 800, a signed merchant data packet 802, a optional consumer digital signature field 804 and a miscellaneous information field 806. The preferred embodiment creates a different RC4 encryption key 800 for each goods and services order 710. As discussed in more detail below, the preferred embodiment then encrypts the RC4 encryption key 800 with the 768-bit merchant public key 308. Thus, only the merchant computer 108 can obtain the RC4 encryption key 800 with the merchant private key 504.

DEPR:
The other information segment 814 contains a term field 840, a summary field 842, a charge slip field 844, a price field 846, and an optional consumer key exchange affidavit field 848 (hereinafter referred to as the consumer affidavit field 848). The term field 840 is a 16-bit number that identifies the number of items. The summary field 842 is a variable-length string that represents the summary of the order which appears on a credit card bill. The charge slip field 844 is a variable-length string which contains the order displayed to the end-user. The price field 846 is a 64 character fixed-length field which contains the amount of the transaction. The consumer affidavit field 848 is not used in the preferred embodiment, but can comprise a fixed-length field which contains the consumer affidavit (the digitally signed consumer public key.) The consumer digital signature field 804 is not used in the preferred embodiment, but can be a fixed-length field containing data encrypted with the consumer private key.

DEPR:
Focusing now on the payment instruction 712, the payment instruction 712 contains a credit card number field 860, a DES encryption key 862, a signed acquirer data packet 864, and a copy of the consumer digital signature field 804. The credit card number field is a 20 character fixed-length string which contains a credit card number. The DES encryption key 862 is a 56-bit value which is randomly generated and which complies with the Data Encryption Standard (DES) encryption scheme described above. The preferred embodiment uses the 56-bit DES encryption key 862 to encrypt the signed acquirer data packet 864 and the consumer digital signature field 804. The preferred embodiment then encrypts the credit card number field 860 and the DES encryption key 862 with the 1024-bit acquirer public key 310. Thus, only the acquirer private key 506 can decrypt the credit card number field 860 and the DES encryption key 862.

DEPR:
The audit goods and services order 902 includes an RC4 encryption key 800, an auditing data packet 906, and the miscellaneous information field 806. The RC4 encryption key 800 is a 56-bit value based on the RC4 encryption scheme

described above. The preferred embodiment encrypts the signed auditing data
packet 906 and the miscellaneous information field 806 with the RC4 encryption
key 800. The preferred embodiment then uses encrypts the RC4 encryption key
800 with the 768-bit on-line network public key 312. Thus, only the on-line
network private key 408 can decrypt the auditing goods and services order.

DEPR:
FIG. 10 illustrates a high level flow chart of the sequence of states which
occur during the registration process. Beginning in a start state 1000, a
preferred embodiment of the present invention proceeds to state 1002. In state
1002, the electronic commerce service 104 generates the on-line network public
key 312 and the on-line network private key 408. As discussed above, the
generation of public key/private key pairs is well known in the art.

DEPR:
After generation of the on-line network public key 312 and the on-line network
private key 408, the electronic commerce service 104 makes the on-line network
public key 312 publicly available, and keeps the on-line network private key
408 private. In the preferred embodiment, software developers typically
incorporate the on-line network public key 312 into the consumer applications
300, the order managers 302, the merchant modules 500 and the acquirer modules
502. In other embodiments, the software developers design the consumer
applications 300, the order managers 302, the merchant modules 500 and the
acquirer modules 502 to access the on-line network 106 so as to obtain the
on-line network public key 312.

DEPR:
Proceeding to state 1004, the merchant module 500 of the preferred embodiment
generates the merchant public key 308 and the merchant private key 504. In
state 1006, the acquirer module 502 generates a acquirer public key 310 and an
acquirer private key 506. As explained above, the merchant public key 308, the
merchant private key 504, the acquirer public key 310 and the acquirer private
key 506 are created with secure techniques known to one of ordinary skill in
the art.

DEPR:
The electronic mail module 306 then sends the encrypted merchant public key
308 and the encrypted acquirer public key 310 to the bindery module 402 in the
electronic commerce service 104. The preferred embodiment uses the on-line
network public key 408 to encrypt the merchant public key 308 and the acquirer
public key 310. Thus, only the bindery module 402 can decrypt the encrypted
merchant public key 308 and the encrypted acquirer public key 310 with the
on-line network private key 408. This prevents others from fraudulently acting
as the bindery module 402.

DEPR:
Proceeding to state 1102, the bindery module 402 directs the secured
technology module 304 in the electronic commerce service 104 to decrypt the
merchant public key 308 with the on-line network private key 408. In addition,
the bindery module 402 directs the secured technology module 304 to decrypt
the acquirer public key 310 with the on-line network private key 408. The
bindery module 402 then stores the decrypted merchant public key 308 and the
decrypted acquirer public key 310 in the electronic commerce database 404.

DEPR:
Proceeding to state 1104, the secured technology module 304 digitally signs
the merchant public key 308. In the preferred embodiment, the secured
technology module 304 creates the digital signature by encrypting a data
segment with the on-line network private key 408. The digital signature is
then appended to the merchant public key 308. In the preferred embodiment, the
digitally signed merchant public key 308 is called the merchant affidavit 410.
In like manner, the secured technology module 304 also digitally signs the
acquirer public key 310 to create the acquirer affidavit 412.

DEPR:
Proceeding to state 1110, the merchant module 500 directs the secured
technology module 304 to decrypt the encrypted merchant affidavit 410 with the
merchant private key 504. Proceeding to state 1112, the acquirer module 502
directs the secured technology module 304 to decrypt the encrypted acquirer

affidavit 412 with the acquirer private key 506. Once the secured technology module 304 decrypts the merchant affidavit 410 and the acquirer affidavit 412 in end state 1114, the merchant can publicly distribute the merchant affidavit 410 and the acquirer affidavit 412.

DEPR:
In the preferred embodiment, the consumers do not register with the bindery. However, in other embodiments, the consumers may separately generate their own consumer public key and consumer private key. Referring now to FIG. 10, in these other embodiments, the order manager 302 in the consumer computer 100 continues the registration process in state 1010. In state 1010, other embodiments generate a consumer public key and a consumer private key. Proceeding to state 1012, the consumer computer 100 registers the consumer public key with the electronic commerce service 104 and keeps the consumer private key private.

DEPR:
Proceeding to state 1202, the bindery module 402 directs the secured technology module 304 in the electronic commerce service 104 to decrypt the consumer public key with the on-line network private key 408. The bindery module 402 then stores the consumer public key in the electronic commerce database 404. Proceeding to state 1204, the secured technology module 304 digitally signs the consumer public key with the on-line network private key 408. In this embodiment, the digitally signed consumer public key is called the consumer affidavit.

DEPR:
Proceeding to state 1208, the electronic mail module 306 in the consumer computer 100 receives the encrypted consumer affidavit and forwards it to the order manager 302. The order manager 302 then directs the secured technology module 304 to decrypt the consumer affidavit with the consumer private key and proceeds to end state 1210. Returning now to FIG. 10, the order manager 302 then proceeds to end state 1012. When a user of the consumer computer 100 purchases an item, this embodiment of the present invention includes the consumer affidavit in the secure purchase order message 102.

DEPR:
Proceeding to state 1308, the decryption module 400 obtains the audit attachment 704 from the secure purchase order message 102. The decryption module 400 then directs the secured technology module 304 in the electronic commerce service 104 to decrypt the audit attachment 704. In the preferred embodiment, the secured technology module 304 uses the on-line network private key 408 to decrypt the RC4 encryption key 800 in the auditing goods and services order 902. With the RC4 encryption key 800, the secured technology module 304 then decrypts the signed auditing data packet 906 and the merchant table 908.

DEPR:
Proceeding to state 1316, the merchant module 500 directs the secured technology module 304 in the merchant computer 108 to decrypt the merchant GSO/PI packet 708. Preferably, the secured technology module 304 uses the merchant private key 504 to decrypt the RC4 encryption key 800 in the merchant goods and services order 710. With the RC4 encryption key 800, the secured technology module 304 encrypts the signed merchant data packet 802, the consumer digital signature field 804 and the miscellaneous information field 806.

DEPR:
In state 1318, the acquirer module 502 receives the payment authorization request 110 and decrypts the payment instruction 712. In the preferred embodiment, the acquirer module 502 directs the secured technology module 304 to decrypt the payment instruction 712. The secured technology module 304 encrypts the DES encryption key 862 and credit card number field 860 with the acquirer private key 506. With the DES encryption key 862, the secured technology module 304 decrypts the signed acquirer data packet 864 and the consumer's digital signature field 804.

DEPR:
Proceeding to state 1322, the merchant module 500 delivers the requested goods

and services and generates a receipt. In the preferred embodiment, the
merchant module 500 creates the receipt with the CreateReceipt function 526.
The CreateReceipt function 526 creates a receipt detailing the goods and
services the merchant has provided to the end-user. In other embodiments, the
CreateReceipt function 526 directs the secured technology to encrypt the
receipt with the consumer public key. The encrypted receipt is then
electronically mailed to the consumer computer 100 where the receipt is
decrypted with the consumer private key.

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image |

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DOCUMENT-IDENTIFIER: US 5881131 A
TITLE: Analysis and validation system for provisioning network related
facilities

ABPL:
An administration system for a public switched telephone network (PSTN)
includes a service order processing system receiving a service request from a
customer requesting service for a customer location, and determining whether
the service request is provisionable responsive to the service request and
predetermined criteria. When the service order processing system determines
that the service request is provisionable, automatically provisioning customer
facilities including at least one of a domain name, a user name, a customer
network address, and an electronic mail address, to execute the service
request based upon information stored by the service order processing system.
The information includes customer identification data and customer facility
data, and the information is maintained by the service order processing system
without substantially altering the customer facility data.

BSPR:
As discussed below in detail, because of the Internet's inherent
distributiveness with respect to, for example, implementing hardware, users
and/or administering institution, there are various ways to gain access
thereto. One common denominator that applies no matter how diverse the
characteristics of the Internet is that all users, either direct or indirect,
require some form of identification, name, telephone number and the like, to
communicate with others. If a user does not have some sort of identification,
others will be unable to communicate or send messages.

BSPR:
Thus, it is clear that users must be able to obtain or use an identification
in a manner that is useful, i.e., substantially unique. To date, we are
unaware of any systematic manner in provisioning these types of
identifications (e.g., domain names, user names, user identifications (IDs),
and the like) to facilitate the provisioning process. Rather, most attempts
have been in the field of telecommunications.

BSPR:
While the above goals of maximizing reuse of customer facilities including
outside plant facilities and office equipment facilities has been a long
standing and traditional objective or goal of all telephone companies for over
one hundred years, we have discovered that the benefits of reusing customer
facilities, including identification, are not sufficient to outweigh the
disadvantages of requiring the necessary alterations to customer facilities.

BSPR:
We have further discovered that it is more beneficial to maintain the existing

connections to customer facilities and/or <u>identification</u> facilities for a
particular customer location, since it is likely another customer will move
into the disconnected customer location or the original customer will return
in the near future, thereby eliminating the need to revise facilities.

BSPR:
It is a feature and advantage of the present invention to maintain the
existing connections and/or <u>identifications</u> to customer facilities for a
particular customer location, since it is likely another customer will move
into, or the original customer will return to, the disconnected customer
location to reconnect services in the near future, thereby eliminating the
need to dispatch installers to install outside plant or office equipment
facilities.

BSPR:
The objects of the invention include reducing the operating cost of
provisioning <u>identifications</u> and business functions, such as Install Inside
and Install Outside; increasing the reliability of providing on-time,
error-free service by reducing the number of orders that require manual
assistance; increasing the flexibility of the provisioning process to support
the activation of a new <u>identifications,</u> products or services quickly and
inexpensively; enhancing customer service and customer retention by providing
faster access to all products and services; providing a strong long-term
information infrastructure that meets the needs of the existing products and
provides a foundation that can handle the requirements of new products.

BSPR:
A further object of the present invention is the efficient <u>identification</u> and
handling of service connection orders that might not automatically flow
through the system for various problems, including data entry problems such as
improper address entry. Another object of the present invention is the ability
to access various facilities databases to efficiently verify and/or correct
problems encountered relating to assigning identifications/facilities to a
customer.

BSPR:
Another object of the present invention is to provide the customer with a
method of easily requesting <u>identifications</u> and/or the assignment of
facilities, such as for example in a new connect, and have such request
automatically provisioned or assigned by a facilities assignment system.

BSPR:
In another aspect of the present invention, an administration system for a
public switched telephone network (PSTN) includes a first automatic service
order processing system which receives a service request from a customer
requesting service. When the service request is eligible, the first automatic
service order processing system automatically provisions first network
facilities including at least one of a domain name, a user name, a customer
address, and an electronic mail address to execute the service request based
upon first information stored by the first automatic service order processing
system, the first information including customer <u>identification</u> data and
customer facility data. The first information is maintained by the first
automatic service order processing system without altering the network
facility data when a disconnect request is received from the customer.

BSPR:
The present invention also features an administration method for a network
including an attendant station for receiving service requests. The method
includes receiving a service request from a customer at a living unit
requesting service, and determining whether the living unit had previously
been equipped with network facilities for service. When the living unit has
not been previously equipped with the customer facilities, the method includes
automatically provisioning customer equipment including at least one of a
domain name, a user name, a customer network address, and an electronic mail
address to execute the service request based upon information including
customer <u>identification</u> data and network facilities. The information is
maintained without altering the network facilities when a subsequent
disconnect request is received from the customer.